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**Universal Banking Failure? An Analysis of the Contrasting Responses of the Amsterdamsche Bank and the Rotterdamsche Bankvereeniging to the Dutch Financial Crisis of the 1920s**

*Christopher Louis Colvin*[1]

**Abstract**

Whilst in some financial systems in the early twentieth century commercial and investment banking activities were carried out by functionally separate firms, in others both kinds of operation were conducted under one roof by "universal banks". Explaining the evolutionary paths that lead to these divergent banking structures has remained a hot topic of multidisciplinary debate for many years. So has their respective exposure to financial crises. On the one hand, universal banks – which hold both long- and short-term assets – are able to reduce information asymmetries and internalise risk. But on the other hand, their mixed asset structure arguably decreases versatility during an economic downturn and may create a "dual market for lemons" in which information asymmetries cause financially sound clients and banks to exit the market, leaving only the riskier crisis-prone ones behind.

This paper analyses these debates using the case study of the Netherlands in the early 1920s. The literature argues that it is during this decade that the Netherlands experienced her one and only traditional banking crisis from 1600 to the present day, and after which her short-lived experiment with a system of universal banking came to an end. By calculating an equity-deposit ratio panel for the Big Five Dutch banks, this paper attempts to measure to what degree the sector evolved to become universal and subsequently returned to functional separation. It then conducts a matched pair comparison of two similar-sized banks operating in the Netherlands in the 1920s: the Amsterdamsche Bank and the Rotterdamsche Bankvereeniging. Whilst the first escaped the crisis relatively unscathed, the second required assistance from the Nederlandsche Bank, the Dutch central bank. A new and detailed narrative of one episode of the crisis using as yet unused primary sources is developed for this comparison.

This paper finds that the Rotterdamsche Bankvereeniging was more universal than her Amsterdam rival. It concludes that it was primarily this difference that caused her to suffer during the crisis. However, it does so with caution in view of the paucity of data to hand and methodological restrictions.

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## 1. Introduction

It is common to distinguish between financial systems in which commercial and investment banking are carried out by separate firms, and those in which “universal banks” carry out both kinds of operation. This paper addresses two issues: (1) under what conditions universal banks come into existence; and (2) whether there is a relationship between financial system structure and financial crises. The Dutch financial system in the 1920s is an interesting case study with which to examine these questions. Until the early twentieth century, the Dutch system was characterised by functionally separated banking.[2] But various developments just prior to and during the First World War transformed this system. Banks became directly involved in the finance of industry, as opposed to through intermediaries.[3] By the early 1920s, the Dutch financial system had in many ways more in common with her German rather than her Anglo-Saxon counterpart. But following a series of (near) bank failures in the early to mid 1920s, Dutch banks underwent a reversal in bank policy and returned to their functionally separated roots.[4]

This paper examines its central questions using a matched pair case study of two similar-sized Dutch banks, one that fared badly in the crisis and one that did not. The secondary literature suggests that these two banks had different policies with regards to long and short-term business. It argues that the Rotterdamsche Bankvereeniging, the bank that fared badly, adopted a universal structure more enthusiastically than

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[2] J. Jonker, "Competing in Tandem: Securities Markets and Commercial Banking Patterns in Europe During the Nineteenth Century.," in *The Origins of National Financial Systems: Alexander Gerschenkron Reconsidered*, ed. D. J. Forsyth, et al., (2002), 84.

[3] e.g. Joh. de Vries, *Geschiedenis van de Nederlandsche Bank: Visserings Tijdvak 1914-1931*, Vol. V Part 1 (1989), 208.

[4] J. Jonker, "Sinecures or Sinews of Power? Interlocking Directorship and Bank-Industry Relations in the Netherlands, 1910-1940," *Economic and Social History in the Netherlands* 3 (1991), 165.

her rival in Amsterdam, the Amsterdamsche Bank. This paper must determine: (1) whether the difference presented in the literature between the two banks is accurate, and if so, (2) whether it was this difference in bank structure that explains the crisis.

This paper is divided into four further sections. Section 2 presents a thematic overview of various developments in the Dutch banking sector up to and including the 1920s crisis period using the secondary literature on Dutch financial history. Sections 3 and 4 then address this paper's two main questions. Section 3 does this using both the theoretical finance theory and the applied finance history literatures. Section 4, the matched pair comparison, addresses these questions using a statistical methodology and through the analysis of primary source materials, including contemporary newspaper articles and high-level management papers from the archives of the two banks. Section 5 concludes that adopting a universal structure appears to increase a bank's exposure to crises, but with some provisos regarding reverse causality. However, a conclusion on the paper's other main question, the determinants of financial systems evolution, could not be made due to various archival difficulties.

Before proceeding, the main (macroeconomic) developments in the Dutch economy from the *fin de siècle* to the late 1920s are briefly examined for the benefit of readers unfamiliar with Dutch economic history. The question asked here is how the Dutch economy fits into the wider European picture. The traditional view is that the Netherlands was a loyal follower of the British example.[5] This view looks initially attractive. Like Britain she experienced a short postwar boom followed by economic downturn in the early 1920s. Like Britain she returned her currency to the

[5] J. L. van Zanden and R. T. Griffiths, *Economische Geschiedenis van Nederland in de 20e Eeuw* (1989), 110.

gold standard in 1925. And like Britain she experienced economic growth and relative prosperity in the second half of the 1920s. But in light of research conducted over the last two decades, this view has been revised. Three themes in this literature are (briefly) examined: (1) the Netherlands' apparent late industrialisation; (2) the economic impact of her neutral status during the First World War; and (3) the reversal in the business cycle in the early 1920s.

(1) *Industrialisation*. Economic historians have long debated the issue of the start of industrialisation in the Netherlands. In the older literature, opinions range from I. J. Brugmans, who dates its beginning in the 1850s,[6] to J. A. de Jonge, who argues for the mid-1890s.[7] But in 1980, Richard T. Griffiths questioned the statistics on which historians had traditionally drawn their conclusions, which he argued were fragmentary and only told the picture for a small part of the economy.[8] This inspired Jan Luiten van Zanden to lead a research project into Dutch industrialisation using modern growth accounting techniques.[9] The project, which took over a decade to complete, has recently concluded that Dutch industrialisation probably commenced in the 1870s as a result of increased investment as a proportion of GDP (due to fall in relative prices of labour versus capital, and a decline interest rates), which in turn is made possible through increased savings.[10]

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[6] I. J. Brugmans, *Paardenkracht en Mensenmacht: Sociaal-Economische Geschiedenis van Nederland 1795-1940* (1961), 201.
[7] J. A. de Jonge, *De Industrialisatie in Nederland Tussen 1850 en 1914* (1968), 340-343.
[8] R. T. Griffiths, "Backward, Late or Different? Aspects of the Economic Development of the Netherlands in the 19th Century," in *The Economic Development of the Netherlands since 1870*, ed. J. L. v. Zanden, (1996).
[9] See preface to J. L. van Zanden and Arthur van Riel, *The Strictures of Inheritance: The Dutch Economy in the Nineteenth Century* (2004).
[10] Ibid., 270. The raw results of the project were printed in a consolidated volume: R. J. van der Bie and J.-P. Smits, eds., *Tweehonderd Jaar Statistiek in Tijdreeksen, 1800-1999* (2001).

(2) *War*. The Netherlands found herself in a very precarious geographical position during the First World War: sandwiched between the belligerent nations. To maintain her neutrality, and to remain successful, she had to play a fine balancing act between the wishes of Germany on the one hand and Britain and the United States on the other. Despite this unique situation, the Netherlands has only received scant attention in the vast literature on the First World War.[11] And historians who have examined the period treated the war as the beginning or end point of their discourse, forgetting to place it in a wider trans-war context.[12] Recently, a new literature has sought to analyse the economic impact of the war. It has found that it varies greatly depending on which aspect of the economy is examined, but that in general it had a net positive effect. New estimates of real Dutch GDP show growth by 2.10 percent over the period 1913-1921, and by 0.64 percent in per capita terms.[13] When compared to the US (which grew by 1.44 percent over the same period, and by only 0.05 percent in per capita terms), or to Northwest Europe as a whole (which suffered a contraction of GDP by 0.43 percent, and by 1.04 percent in per capita terms), the Dutch figures look even more impressive.[14] Much of this can arguably be explained by neutrality, which prevented the destruction to the kingdom's industry, agriculture and labour force, and largely enabled her to continue to prosper from trade with nations on both sides of the conflict. But Herman J. de Jong argues that the Netherlands emerged from the conflict in a

[11] M. Frey, "Trade, Ships, and the Neutrality of the Netherlands in the First World War," *The International History Review* XIX, No. 3 (1997). 541
[12] H. J. de Jong and R. M. Albers, "Industriële Groei in Nederland, 1913-1929: Een Verkenning," *NEHA Jaarboek voor Economische, Bedrijfs- en Techniekgeschiedenis* 57 (1994). 445
[13] B. van Ark and H. J. de Jong, "Accounting for Economic Growth in the Netherlands since 1913," *Economic and Social History in the Netherlands* 7 (1996), 201.
[14] Ibid. Figure for Northwest Europe is an unweighted average of Austria, Belgium, Denmark, Finland, France, Germany, the Netherlands, Norway, Sweden, Switzerland and the UK.

significantly stronger position, especially with respect to industrialisation and productivity growth,[15] and that this improvement was over and above her long-term path, i.e. that the war acted as a trend break.[16] It has also recently been argued that the population in general benefited from her neutral politics, not just a small industrial and commercial elite: the author shows that standards of living (measured by a composite index of income per head, longevity and education) improved over the trans-war period.[17]

(3) *Depression*. Immediately following the end of hostilities, Dutch industry experienced an upswing in demand. The economic outlook appeared so positive that the government was able to concede to trade union demands for shorter working hours and introduced a new 45-hour workweek in 1919.[18] But this positivism did not last long: by September 1923, the London correspondent of the Dutch daily newspaper *De Telegraaf* wrote: ‘On all hands it is admitted that the situation in the Netherlands is worse than the present generation has ever known.’[19] In some respects the economy had indeed turned sour: over the period 1920-1923, unemployment was up from 1.75 percent to 3.30 percent, the cost of living had fallen by 25 percent, and bankruptcies risen from below 1500 a year to nearly 4000 a year.[20] And it is against this backdrop that the Netherlands experienced her only classic banking crisis in the entire

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[15] H. J. de Jong, "Between the Devil and the Deep Blue Sea: The Dutch Economy During World War I," in *The Economics of World War I*, ed. S. N. Broadberry, et al., (2005). 138

[16] De Jong and Albers, "Industriële Groei in Nederland, 1913-1929: Een Verkenning." 445

[17] C. L. Colvin, "War Makes People Better Off: An Attempt to Measure the Impact of the First World War on the Quality of Life in the Netherlands," (Mimeo, Economic History Department, London School of Economics and Political Science, 2006).

[18] For a full account of the debate, see L. Heerma van Voss, *De Doodsklok voor den Goeden Ouden Tijd: De Achturendag in de Jaren Twintig* (1994).

[19] J. C. van der Veer, "The Dutch Economic Situation," *The Economist*, 22 September 1923.

[20] Van Zanden and Griffiths, *Economische Geschiedenis van Nederland in de 20e Eeuw*, 111.

period from 1600 to the present day.[21] However, by international standards the plight of the Dutch economy was arguably unremarkable. For instance, annual real income per capita (measured by real Net National Product (GNP minus taxes), deflated using consumer prices) actually rose by 6.2 percent over this same period (1920-1923).[22] And taking the decade as a whole, the Netherlands fared very well on international standards.[23] Despite this, much of the history writing of the 1920s remains negative and describes it as a deep depression. Perhaps views remain clouded by the negativity of the contemporary 1920s observers of the Dutch economy. Indeed, in 1989, Griffiths noted exactly this and argued therefore that: 'the history writing of the period 1920-1923 awaits a thorough revision by historians of the Netherlands'.[24]

## 2. Dutch Banking: A Thematic Overview

The Dutch banking sector underwent some substantial changes in the first decades of the twentieth century. At the turn of the century, banks played second fiddle to a sophisticated capital market. By the time of the crisis in the early 1920s, they had developed into large multi-branch networks with a wide portfolio of client types. This section presents a thematic overview of arguably the most important developments in the sector. The changing relationship between banks and industry is central to this review. Special attention is given to the impact of the following: (1) the declining dominance of the *prolongatie* on-call money market; (2) the bank merger wave that commenced just prior to the First World War; (3) the short trade-led postwar boom and the economic "depression" that followed; and (4) the changing role of the Dutch central bank.

[21] J. L. van Zanden, "Old Rules, New Conditions, 1914-1940," in *A Financial History of the Netherlands*, ed. M. t. Hart, et al., (1997), 143.
[22] Colvin, "War Makes People Better Off," 6.
[23] C. H. Feinstein et al., *The European Economy between the Wars* (1997), 13.
[24] Author's translation, Zanden and Griffiths, *Economische Geschiedenis van Nederland in de 20e Eeuw*, 115.

Table 1. Assets of Financial Institutions as a Percentage of Sector Total, 1900-1928

| | 1900 | 1913 | 1918 | 1923 | 1928 |
|---|---|---|---|---|---|
| Nederlandsche Bank | 25.4 | 15.7 | 22.3 | 17.9 | 13 |
| Commercial banks | 36.2 | 44.9 | 52.4 | 48.5 | 54 |
| *Big Five* | 17.4 | 22.7 | 26.6 | 23.3 | 22 |
| Savings banks | 8.2 | 6.4 | 3.4 | 4.7 | 5 |
| Rijkspostspaarbank | 7.8 | 8.8 | 5 | 5.4 | 6 |
| Agricultural banks | 0.1 | 2.3 | 4.2 | 5.6 | 7 |
| Mortgage banks | 22.3 | 21.9 | 10.9 | 10.7 | 13 |
| Giro services | - | - | 1.8 | 7.3 | 3 |
| Total assets (in millions of guilders) | 1,091 | 2,315 | 5,472 | 6,441 | 7384 |
| *Idem* , as a percentage of national income | 61 | 83 | 134 | 122 | 113 |

***Notes:*** National income is measured as Net National Income at market prices. The Big Five constituted the Amsterdamsche Bank, the Incasso-Bank, the Nederlandsche Handel-Maatschappij, the Rotterdamsche Bankvereeniging and the Twentsche Bank. Since 1990 all are part of the ABN AMRO Bank.
***Source****:* Van Zanden, "Old Rules, New Conditions, 1914-1940." 127

(1) *Prolongatie.* By the dawn of the twentieth century, the Netherlands had an advanced financial system with a sophisticated capital market and a funded and consolidated system of national debt. She had a centralised unitary state and a central bank that suffered little government interference. But despite this, her private banking sector was relatively small and restricted itself mainly to the finance of international trade. The sector had not yet entered the business of universal banking.[25]

[25] J. Jonker, "Competing in Tandem: Securities Markets and Commercial Banking Patterns in Europe During the Nineteenth Century.," in *The Origins of National Financial Systems: Alexander Gerschenkron Reconsidered*, ed. D. J. Forsyth, et al., (2002), 68.

In fact, comparatively little banking activity went on at all: in 1913, 64 percent of Dutch money supply was in the form of banknotes, versus 29 percent in Belgium, 37 percent in Germany and only four percent in Britain.[26] Jonker argues that the Netherlands ended up without universal banks because her sophisticated financial system inherited from earlier times simply left no room for them.[27] Amsterdam merchants had developed a flexible credit source called *prolongatie* – short-term credit borrowed against securities. This system outcompeted the commercial banking system in the provision of commercial finance.

The outbreak of war in July 1914 changed the situation dramatically, and arguably sparked a revolution in Dutch banking. The Amsterdam stock exchange was temporarily closed in fear of a crash, and the *prolongatie* system – which relied on a functioning exchange – was frozen as a result. The system never recovered, despite the exchange re-opening. During the war, the commercial banking sector largely filled the void left by the defunct *prolongatie* market and "sucked in" some of the increased liquidity as a result of new war business: as a proportion of total money supply, bank deposits increased from 23 percent in 1906 to almost 56 percent by 1920.[28] As a result, banks became increasingly involved with the direct finance of industry, helping to establish big conglomerates (e.g. steel producer Hoogovens in 1918), and arguably started to operate more like German universal banks. Jonker argues that the reason for the *prolongatie* market's downfall lies with a change in the Dutch interest rate structure.[29] From the late 1890s banks could not compete for deposits because short-term interest rates

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[26] Van Zanden, "Old Rules, New Conditions, 1914-1940," 125.
[27] Jonker, "Competing in Tandem," 69.
[28] Van Zanden, "Old Rules, New Conditions, 1914-1940," 125.
[29] J. Jonker, "Spoilt for Choice? Banking Concentration and the Structure of the Dutch Banking Market, 1900-1940," in *The Evolution of Financial Institutions and Markets in Twentieth-Century Europe*, ed. Y. Cassis, et al., (1995), 191-192.

were significantly above the yield on government bonds. But because of the increased risks associated with the outbreak of war, the yield on government bonds rose to a level higher than the short-term interest rate on *prolongaties*, which therefore became an expensive form of credit for longer than a month.

Table 2. Developments in the Dutch Commercial Banking Sector, 1900-1930

| | | | | | *of which:* | | | |
|---|---|---|---|---|---|---|---|---|
| | Total bank number | Net change | Newly estab-lished | Dissa-peared | *merged* | *taken over* | *liquida-ted* | *bank-rupted* |
| *1900* | *242* | | | | | | | |
| 1901-1905 | 279 | +37 | 52 | 15 | *0* | *2* | *6* | *7* |
| 1906-1910 | 305 | +26 | 47 | 21 | *1* | *1* | *12* | *7* |
| 1911-1915 | 356 | +51 | 79 | 28 | *1* | *9* | *7* | *11* |
| 1916-1920 | 330 | -26 | 76 | 102 | *5* | *83* | *12* | *2* |
| 1921-1925 | 375 | 45 | 93 | 48 | *1* | *23* | *13* | *11* |
| 1926-1930 | 385 | +10 | 67 | 57 | *2* | *20* | *28* | *6* |

***Source:*** De Nederlandsche Bank. *Financiële Instellingen in Nederland 1900-1985: Balansreeksen en Naamlijst van Handelsbanken*, 1987, 17.

(2) *Bank concentration.* In addition to significant growth in the size and scope of the Dutch system, the first decades of the twentieth century also experienced a merger wave. Whilst the number of independent banks increased from 242 in 1900 to 375 by 1921-1925 (see Table 2), as a proportion of total bank assets, that of the Big Five Dutch banks[30] increased from 17.4 percent in 1900 to 23.3 percent in 1923 (see Table 1). The merger wave between banks started in earnest in 1911, the year

[30] See Note under Table 1 for list of Big Five

in which the Rotterdamsche Bank merged with the Deposito- en

Administratiebank to form the Rotterdamsche Bankvereeniging (RBV). The concentration process continued as banks in the big cities of Amsterdam, Rotterdam and The Hague bought up provincial bank networks.[31] The banks evolved from trade financiers to *algemene banken* (general banks), offering a complete range of services to their clients.[32]

Despite the increased concentration, the sector remained segmented. Although the Big Five were increasing in size relative to the rest of the sector, they by no means dominated. There were a host of smaller, and often specialised, banks operating in the kingdom throughout the transwar period. These included smaller *algemene* banks such as the Rotterdam-based Marx & Co.’s Bank and the Amsterdam banks Bank Associatie and Algemeene Spaar- en depositobank. There were a large number of provincial banks, some of which were independent, and others of which were part owned – or even fully owned – subsidiaries of the larger *algemene* banks. There was a group of overseas banks that specialised in the finance of trade with the Dutch East Indies and other colonies. A number of banks were specialised in the investment banking business of securities. Others specialised in deposit banking. These were known as the *middenstandsbanken*, or banks for the middle classes. There were also a number state or municipality-owned savings houses. And small credit cooperatives along the lines of the German Raiffeisen model were an increasingly popular means of securing credit in rural communities.

(3) *Boom and bust.* Following the end of the Allied blockade and the German U-boat campaign in 1918, Dutch industry and agriculture enjoyed a period of export-led growth. Increased profit potential resulted

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[31] De Vries, *Visserings Tijdvak 1914-1931*, 205.
[32] Jonker, "Spoilt for Choice?," 288.

in a strong demand for bank credit.[33] The massive expansion in gold reserves of the Nederlandsche Bank during the war (from 170.7 million to 726.4 million guilders) underpinned this expansion.[34] But by 1920, the Dutch economic cycle reversed. The Dutch commercial banking system came under massive deflationary pressure, which can be partly attributed to the state's plan to return the link between the guilder and gold at pre-war parity, and partly to her German assets had been rendered worthless as a result of the hyperinflation in that country. In 1921, rumours started about the RBV being overstretched, and caused a run on the otherwise financially sound Algemeene Spaar- en depositobank.[35] In 1922, Marx & Co.'s Bank was forced into liquidation.[36] Then, after a period of relative calm, the RBV and several smaller banks and credit cooperatives ran aground in 1924-25. In all, more than 35 banks were hit by the crisis in the Netherlands, though some survived.[37]

By 1924, the Dutch enthusiasm with universalism had started to wane. Marx & Co.'s Bank, which had invested heavily in industrial enterprises, was wound down at great cost to the Nederlandsche Bank (some 10 million guilders).[38] And the RBV had to call in the Nederlandsche Bank to act as a guarantor and undergo a change in her management before she could continue. Although there have been a number of new historical works covering different aspects of Dutch financial history, as yet there has been no detailed analysis of the

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[33] De Vries, *Visserings Tijdvak 1914-1931*, 227.
[34] Ibid., 228-230. De Vries argues that much of this new credit was granted without sufficient inquiry into the long-term viability of the borrowers, especially that issued by provincial banks.
[35] Ibid., 233.
[36] Ibid., 242-243.
[37] J. Jonker and J. L. van Zanden, "Method in the Madness? Banking Crises between the Wars, an International Comparison," in *Banking, Currency, and Finance in Europe between the Wars*, ed. C. H. Feinstein, (1995), 80. See also Table 43 of De Vries, *Visserings Tijdvak 1914-1931*, 243-238 for a fuller overview of the banks involved.
[38] De Vries, *Visserings Tijdvak 1914-1931*, 243.

determinants of the bank failures.[39] This paper, and especially its Section 4.2, aims to go some way towards rectifying this lack of understanding for the case of the RBV in 1924.

(4) *The central bank*. The Nederlandsche Bank was a privately run joint-stock company, designed to be the Dutch state's bank and the national circulation bank. She was granted the monopoly over the issue of government debt and of legal tender in the kingdom. In return, the government received a share of her profits, and had non-executive representation on her governing board.[40] However, the role of the Nederlandsche Bank within the Dutch financial system as a whole remained ambiguous until at least the 1950s, especially with respect to lender-of-last-resort provision.[41] The Bank competed with the private sector for the provision of business credit through a network of provincial branches. She effectively had a dual status as *de facto* regulator of, and competitor with, the commercial banks. And despite her new role as national financial coordinator during the war, her status in both these fields was arguably in relative decline. Whilst the banking sector was experiencing rapid change, the Nederlandsche Bank arguably failed to adapt. She had no formal regulatory role and did not monitor private banks.[42] Johan de Vries argues that the Nederlandsche Bank was central to the structural crisis in the banking sector, that she was 'sucked into the abyss of lack of experience', especially with respect to the new universal

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[39] This is illustrated by the large gaps in De Vries's Table 43

[40] J. Kymmell, *Geschiedenis van de Algemene Banken in Nederland 1860-1914*, Vol. II Part B (1996), 353.

[41] J. Jonker, "Between Private Responsibility and Public Duty. The Origins of Bank Monitoring in the Netherlands, 1860-1930," *Financial History Review* 3, No. 2 (1996), 140-144.

[42] Kymmell, *Geschiedenis van de Algemene Banken*, 352. Indeed, the Bank's lack of formal regulatory oversight was a topic of much debate in the 1920s, with some blaming the financial crisis on the lack of formal supervision of the private banking sector. See e.g. Hans Max Hirschfeld, *Nieuwe Stroomingen in het Nederlandsche Bankwezen* (1925), 24-29.

banking structure adopted by part of the sector.[43] The bank arguably shared the sector's naïve optimism and may therefore have remained oblivious to its problems.

## 3. Universal Banking: The Debates and the Dutch Case

There has been much debate on the origins of different national financial systems, including why universal banks developed in some countries, whilst in others banks remained functionally separated. Since the 1950s, Alexander Gerschenkron's "economic backwardness" thesis has dominated this literature.[44] Gerschenkron argues that universal banks evolved in late-industrialising nations in order to compensate for structural impediments – or missing "prerequisites" – to economic growth. Although criticisms and exceptions to Gerschenkron's thesis have emerged, alternative all-encompassing explanations are few. Daniel Verdier's recent contributions are perhaps the closest to such an explanation.[45] He argues that economic backwardness is irrelevant, instead defining universality as a function of market segmentation and lender-of-last-resort provision. Section 3.1 examines the evolution of the Dutch financial system in light of these models and the secondary literature presented in Section 2.

In addition to the debate on the evolution of national financial systems, there is also much interest in the implications of alternative financial system structures, including their associated financial crisis risk.

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[43] Author's translation, De Vries, *Visserings Tijdvak 1914-1931*, 232.
[44] Alexander Gerschenkron, "Economic Backwardness in Historical Perspective," in *Economic Backwardness in Historical Perspective: A Book of Essays*, (1962).
[45] Summarised in Daniel Verdier, "Explaining Cross-National Variations in Universal Banking in Nineteenth-Century Europe, North America, and Australasia," in *The Origins of National Financial Systems: Alexander Gerschenkron Reconsidered*, ed. D. J. Forsyth, et al., (2002).

The traditional argument against universal banking systems is that when operating under one roof, commercial and investment bankers abuse conflicts of interest, and are responsible for the mismanagement of bank assets and the sale of low-quality, highly speculative securities to unsuspecting investors.[46] But in light of new theoretical and empirical studies, this traditional view that universal banks are necessarily "evil" and that functionally separated banks are necessarily "good" has been reassessed. Section 3.2 examines the relationship between universality and financial crises using concepts from the asymmetric information literature, and subsequently looks at the exposure to financial crises of the Dutch financial system in the early twentieth century, again with the help of the secondary literature presented in Section 2.

### 3.1 Gerschenkron, Verdier and the Evolution of the Dutch Financial System

Gerschenkron argues that universal banks evolved as explicit instruments of industrialisation, designed to solve a market coordination failure. He proclaims that the industrialisation of England occurred through internal finance and without any substantial long-term investment from banks, but that Continental Europe – and particularly Germany – could not finance industrialisation in this way because of a scarcity of capital, technology and entrepreneurship.[47] It was this "backwardness" that caused banks to combine short-term with long-term business, and therefore determined the evolution of their banking systems towards universality. And it was the universal banks in turn that determined

[46] It was this type of argument that was the motivation for the 1933 Glass-Steagall Act, which guaranteed the separation of commercial and investment banking in the US until 1999. Carlos D. Ramírez, "Did Glass-Steagall Increase the Cost of External Finance for Corporate Investment?: Evidence from Bank and Insurance Affiliations," *Journal of Economic History* 59, No. 2 (1999), 373.

[47] Gerschenkron, "Economic Backwardness," 14.

Germany's development of heavy rather than light industry, and the cartelisation of German companies.[48] The net result, he argues, was that the industrialisation of Germany took place along lines similar to England's, although by different means.[49]

However, Gerschenkron's thesis on the role of banks in industrialisation is not without its critics. Some academics notice important flaws in his historical narrative, whilst others criticise Gerschenkron's narrow analytical scope. Rondo Cameron notes, for instance, that the establishment of German industry pre-dates the creation of her big joint-stock banks by several years, if not decades.[50] Caroline Fohlin argues that the German banks developed many of their Gerschenkronian "substitutes for prerequisites" only to a very limited extent during that country's initial industrialisation.[51] Joost Jonker argues that the development of Europe's banks must be understood in tandem with that of her financial markets.[52] Timothy Guinnane argues that German universal banks were only part of the picture, and that the role of other types of banking institutions also need to be considered.[53] And Larry Neal argues that outside finance *was* crucial in the early stages of the British industrial revolution, although through capital markets not banks.[54] But arguably Gerschenkron's biggest flaw is that his model is practically un-falsifiable: just about anything can be construed as being a substitute for a prerequisite.

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[48] Ibid., 15
[49] Ibid., 16
[50] Rondo Cameron, *Banking and Economic Development: Some Lessons of History* (1972), 12-13.
[51] C. Fohlin, "Universal Banking in Pre-World War I Germany: Model or Myth?," *Explorations in Economic History* 36 (1999), 305-306.
[52] Jonker, "Competing in Tandem," 84.
[53] Timothy W. Guinnane, "Delegated Monitors, Large and Small: Germany's Banking System, 1800-1914," *Journal of Economic Literature* 40 (2002), 74.
[54] Larry Neal, "The Finance of Business During the Industrial Revolution," in *The Economic History of Britain since 1700. Volume 1: 1700-1860*, ed. R. Floud, et al., 2nd edition, (1994).

Given the theoretical difficulties of Gerschenkron's thesis, and its problematic evidence, then how else can the diverging evolutionary paths of Europe's financial systems be explained? Daniel Verdier has recently developed an alternative grand narrative.[55] Whilst Gerschenkron's thesis focuses on the asset side of a bank's balance sheet (loans and the demand thereof), Verdier emphasises instead the liability side (deposits). Verdier's methodology is used in Section 4.1 to measure the level of universality of the Dutch banking sector during the period of her financial crisis. Meanwhile, this section continues first by examining Verdier's model in more detail. Using the secondary literature on Dutch banking, it subsequently explores which of the two models presented in this section fits best the evolutionary path of the Dutch financial system.

Verdier's narrative begins with the unleashing of private banking fortunes into joint-stock deposit banking in the mid nineteenth century. Left to market forces alone, these new banks expanded domestically to benefit from internal economies of scale and scope, clustered together around financial centres to benefit from external economies associated with proximity to competition and clients, and expanded abroad to gain access to new business and to spread risks. These large banks and their increasing branch networks threatened to eat up or drive independent local (unit) banks out of the market, potentially to the detriment of small and medium-sized firms – the local banks' clientele. Verdier argues that the degree to which this story was born out in practice depended on: (1) the power of local government to interfere with capital flows through legislation; and (2) the level of competition they received from state-run non-profit financial institutions, such as savings banks. Hence joint-stock banks operated in different countries to various degrees of success,

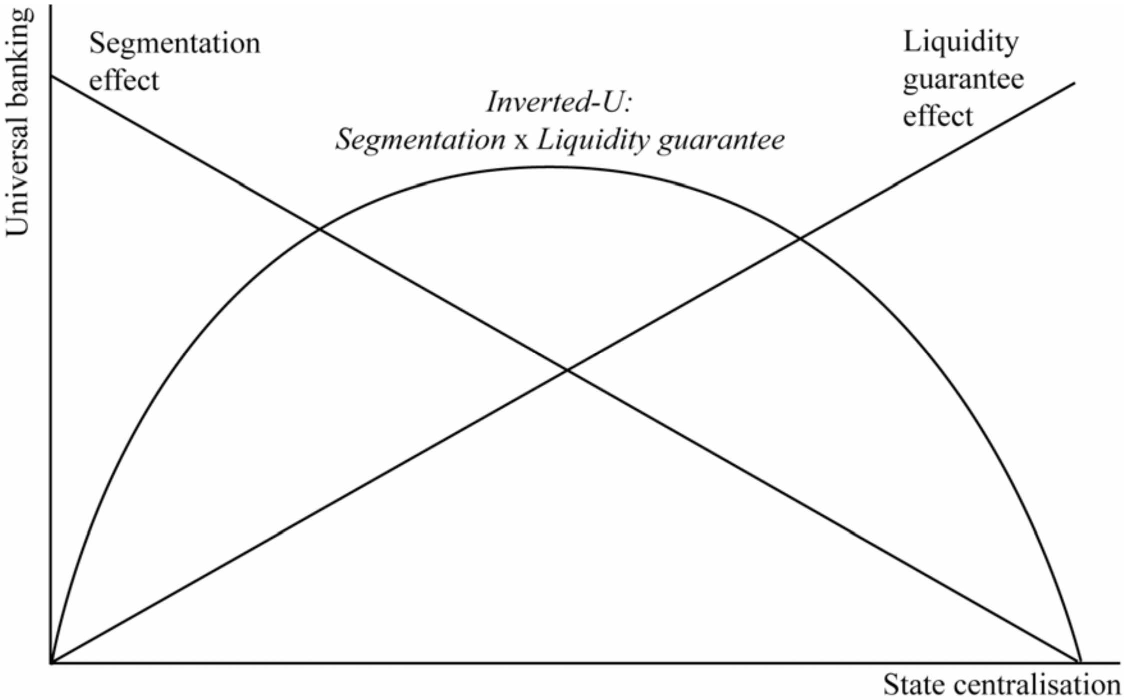
[55] The exposition of this model draws freely from Chapter 6 of Daniel Verdier, *Moving Money: Banking and Finance in the Industrialized World* (2002).

depending on the power and priorities of local versus central government and the level of deposit market segmentation this created.

Verdier argues that joint-stock banks naturally moved from investment banking towards more profitable and less risky “modern” deposit banking with the improvement of payments systems technology. The degree to which this was able to occur in practice depended on the ability of these banks to capture the market for individuals’ deposits. Left unhindered, such as in Britain, joint-stock banks completely left the business of investment banking behind. But in countries with a strong degree of segmentation, such as Germany, these banks were left mid-course. They did not completely vacate the field of investment banking because they could not capture a sufficient level of individuals’ deposits. Hence these banks became universal banks, offering both types of business.

Fragmentation of the deposit market is for Verdier a necessary, but not sufficient, condition for the stabilisation for universal banking. The second condition is the existence of a liquidity guarantor, such as a central bank with lender-of-last-resort functionality. The nature of universal banks, which mix illiquid long-term and liquid short-term assets, means that they have difficulty matching assets and liabilities, especially during (cyclical) business downturns. Balance sheets are uninformative and will not reveal the actual solvency of the bank. It is therefore difficult for universal banks to gain depositors’ trust because of the absence of a credible commitment mechanism. Thanks to a lender-of-last-resort guarantee, banks can operate without the risk of default during a financial crisis and are therefore able to attract deposits.

Figure 1. Universal banking as an Inverted-U Function of State Centralisation




***Source:*** Verdier, "Explaining Cross-National Variations", Figure 1.3, p.35

In summary, Verdier has it that universal banking is only observed in countries with both segmented capital markets and in the presence of "modern" central banks. Specialised banking is observed if one of these two conditions is not met. Verdier argues that the two forces tend to work in opposite directions: whilst the segmentation condition is not met in centralised states, the liquidity guarantee condition is not met if the state is too decentralised. Financial systems characterised by universal banking tend therefore to be present in semi-centralised states. This is illustrated by an inverted-U function of the degree of state centralisation (see Figure 1).

This section now briefly explores which of the two models presented above best fits the evolutionary path of the Dutch financial system using the secondary literature. The relationship between the banking “revolution” and the simultaneously occurring accelerated industrialisation at the beginning of the twentieth century is key to this debate. W. M. Westerman, son of the RBV’s director at the time of her creation in 1911, wrote in a 1920 dissertation that his father’s merger represented a trend break in Dutch economic development; when comparing 1910 with 1911, he states that ‘the difference is so remarkable that one can scarcely imagine that such a genuine and sudden reversal could have been caused by anything else [than the merger]’.[56] He argues that the developments in the sector, and in particular the increased coverage of the branch networks, were the cause of the industrialisation. In essence, this is a Gerschenkronian argument *avant la lettre*.

Conversely, Jonker argues that the banking revolution occurred in response to industrialisation, and not because of it.[57] He argues that the ‘banks barely manage to keep pace with economic developments despite expansion and concentration’.[58] Although he notes that some banks started to forge closer ties with industry following rising industrial profits, he argues not all banks did so. The sector as a whole was largely conservative in its outlook and many banks did not wholeheartedly embrace the German universal banking model.[59] When banks did eventually start to develop and move into long-term credit provision, they were following industry rather than leading it.

Perhaps the Netherlands’ sophisticated financial markets (with her *prolongatie* system) could be interpreted as a Gerschenkronian missing prerequisite, and an alternative to universal banks in the Netherlands’ early industrialisation. But if so, then it was arguably not a very successful

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[56] Author’s translation, W. M. Westerman, *De Concentratie in het Bankwezen: Een Bijdrage Tot de Kennis der Economische Ontwikkeling van Onzen Tijd*, 2e ed. (1920), 120.
[57] Jonker, "Spoilt for Choice?," 203-204.
[58] Ibid., 188
[59] Ibid., 188, 202

one: despite the tentative industrialisation of the late nineteenth century, the Netherlands lacked a significant industrial sector. A further criticism is that Gerschenkron's thesis makes no explicit provision for a decline in universality, as occurred in the Netherlands following her crisis.

Table 3. Equity-Deposit Ratios for 16 Countries, 1913

| | Share of the deposit market by sector, 1913 in percent | | | | |
|---|---|---|---|---|---|
| | Profit, centre (a) | Non-profit, private (b) | Non-profit, state (c) | Profit, local (d) | Equity-deposit ratio, 1913 |
| Australia | 65 | 34 | 1 | 0 | 0.35 |
| Austria-Hungary | 37 | 58 | 5 | 0 | 2.00 |
| Belgium | 59 | 1 | 40 | 0 | 0.72 |
| Canada | 92 | 3 | 5 | 0 | 0.19 |
| Denmark | 49 | 51 | 0 | 0 | 0.32 |
| France | 66 | 8 | 26 | 0 | 0.43 |
| Germany | 28 | 71 | 1 | 0 | 0.73 |
| Italy | 27 | 40 | 33 | 0 | 0.88 |
| Netherlands | 54 | 22 | 23 | 0 | 1.58 |
| New Zealand | 58 | 4 | 38 | 0 | - |
| Norway | 49 | 51 | 0 | 0 | 0.25 |
| Spain | 67 | 33 | 0 | 0 | 5.00 |
| Sweden | 63 | 35 | 2 | 0 | 0.45 |
| Switzerland | 39 | 61 | 0 | 0 | 0.56 |
| UK | 80 | 6 | 14 | 0 | 0.10 |
| US | 33 | 25 | 0 | 42 | 0.25 |

***Notes:*** (a) constitute commercial banks regulated by the central government; (b) constitute savings banks, credit societies, mortgage banks; (c) constitute postal savings banks; and (d) constitute commercial banks regulated by local government.
***Source:*** Verdier, "Explaining Cross-National Variations", 36. For the Netherlands, Verdier uses only data for the Big Five.

Verdier tests his hypothesis by developing a quantitative measure of universality: the equity-deposit ratio. This is the ratio of a bank's least liquid resources (capital plus reserves) to its most liquid ones (deposits plus savings). The idea is that commercial banks that specialise in short-term lending have little need for short-term equity. Instead they finance their activities with short-term deposits and savings, without the risk of illiquidity in the event of a bank run. Universal banks, in contrast, have long-term positions in industry, and must therefore maintain long-term resources in case they turn illiquid during an economic downturn. Therefore, whilst lower values of the ratio suggest that specialist commercial banking is dominant, higher values suggest universal banking. Verdier argues that the ratio is bounded upwards, as too high a value would indicate a specialisation in investment banking.[60] However, Verdier is unclear on exactly how high the ratio has to be before investment banking is considered dominant.

Verdier calculates the equity-deposit ratio for a cross-section of the aggregate balances of the major banks of 16 countries in 1913. This is reported in Table 3 above, in addition to the share of the deposit market held by bank type. Verdier argues that in general the evidence supports his hypothesis. For instance, Germany (the universal banking case in point) has a higher equity-deposit ratio than the UK (the antithesis of universal banking). Verdier notes that there are a number of outliers, including the Netherlands. However, he is unable to come up with an explanation with which he is satisfied.[61] There are three explanations that he arguably overlooked in the case of the Netherlands. (1) The *prolongatie* market is still strong around this time, so data for this should be included in the denominator, as it is a relatively liquid form of finance.

(2) The year 1913 is not typical for the Netherlands as the bank concentration movement is getting underway and banks are issuing lots

[60] Verdier, *Moving Money: Banking and Finance in the Industrialized World*, 113.
[61] Daniel Verdier, *Universal Banking and Bank Failures between the Wars*, *EUI Working Paper No. 97/11.* (1997), 26.

of new share capital as a result. If these two problems are addressed, the equity-deposit ratio is likely to be lower, but will probably still indicate universal rather than specialised. (3) The data used for the Netherlands only covers the Big Five banks, not the entire banking sector. But, as shown in Table 1, only 22.7 percent of total bank assets are held by these five institutions and many other – specialised – banks and credit cooperatives are operating in the country at the time. If these are added into the equation, the ratio may to be significantly lower.

If Verdier's figures are to be believed, then there are three further problems with his model. (4) Specialised banks remained in operation and the new universal banks did not dominate. (5) Dutch banks appear from the literature to have moved from deposit banking to investment banking, not the other way around. Finally, (6) the level of regulation of the banking sector appears to be minimal and the lack of explicit deposit insurance from the Nederlandsche Bank did not provide depositors with the necessary confidence in the system.[62] Given the secondary literature on Dutch banking, the degree to which Verdier's two conditions for universality are met is therefore unclear. However, despite the problems outlined above, his measure of universality is very intuitive and useful. It is developed further in Section 4.1 for cross-sectional time series data for the Big Five banks in order to get a better sense of the sector's dynamics (or at least this part of the sector).

[62] This may have contributed to the success of the *prolongatie* system, where depositor had a collateral should the borrower fail. Personal communication with Dr. Jonker, 1 October 2006.

## 3.2 Banking Scope and Associated Crisis Risk in the Dutch Banking Sector

Before proceeding, a definition of a financial crisis is in order. Michael Bordo's characterisation of a financial crisis encompasses a very wide range of definitions present in the literature. His key ingredients are:[63] (a) a widespread change in expectations; (b) fear of solvency of financial institutions; (c) an attempt to convert real and illiquid assets into money; (d) threat to solvency of sound commercial banks; (e) bank runs precipitated by these threats; (f) a reduction in money supply as a result of these bank runs; (g) a fall in real economic activity and general price level; (h) a decline in profits, and an increase in bankruptcies; (i) a debt crisis; and (j) the whole process arrested from the outset by timely intervention of some authority. There is much debate and different writers focus on different aspects of Bordo's recipe. Monetarists have associated financial crises with bank runs.[64] Others, such as Charles Kindleberger, hold a much broader definition.[65] This paper adopts a broad definition, but pays particular attention to the bank run element of a crisis.

As discussed elsewhere, a universal bank provides any one client with an entire range of financial services, from underwriting his securities, to holding deposits and savings, to offering insurance cover. It often owns (substantial quantities of) equity in its client firms and elects (or appoints) its employees as members of clients' management or supervisory boards. At the other end of the spectrum lies functionally separated banking,

[63] M. Bordo, "Financial Crises, Banking Crises, Stock Market Crashes and the Money Supply: Some International Evidence, 1870-1933," in *Financial Crises and the World Banking System*, ed. F. Capie, et al., (1986), 190-191.
[64] F. S. Mishkin, "Asymmetric Information and Financial Crises: A Historical Perspective," in *Financial Markets and Financial Crises*, ed. R. G. Hubbard, et al., (1991), 70.
[65] C. P. Kindleberger, *Panics, Manias and Crashes*, 4th ed. (2002), 13-16.

under which one firm is supplied financial services by a host of different specialised financial institutions, such as specialised investment banks.

There is no overall consensus in the literature on the relationship between banking scope (the choice between universal and functionally separated banking) and financial crisis risk. On initial inspection, it may appear that universal banks have a lower risk of failure than their specialised competitors: they are highly diversified, often larger and arguably benefit from reduced information asymmetries.[66] Significantly, they are able to internalise the effects of problems in one line of business by drawing on the resources of another. However, there are two potential problems with this ability: (1) the resulting lower versatility of universal banks during an economic downturn; and (2) the creation of a "dual market for lemons"[67] resulting from information asymmetries between (a) borrowers and banks, and (b) depositors and banks. Each is addressed in turn below. The Dutch case is subsequently briefly examined in light of this discussion.

(1) During an economic downturn, universal banks arguably suffer more than their functionally separated counterparts. Significant proportions of a universal bank's assets are geared towards the long-term and are more difficult to liquidate in times of need. A bank run precipitated by some event[68] may therefore have more serious consequences for a universal bank because it is unable to provide customers with their

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[66] With respect to information asymmetries, whilst specialised bankers may know detailed information about their segment of the market, universal bankers service many different sorts of client, and therefore know about more segments of the market. George J. Benston, *The Separation of Commercial and Investment Banking: The Glass-Steagall Act Revisited and Reconsidered* (1990), 181-213.

[67] The term "market for lemons" originates from G. Akerlof, "The Market for Lemons: Qualitative Uncertainty and the Market Mechanism," *Quarterly Journal of Economics* 84 (1970).

[68] The arrival of nonbank-specific, aggregate, information that results in a sudden, but rational, revision in the perceived riskiness of bank deposits when information. Mishkin, "Asymmetric Information," 70-71.

deposits on such short notice. Meanwhile, specialist commercial banks are more able to meet consumer demand for deposit withdrawal, whilst specialist investment banks are less prone to bank runs because of the long-term relationships they have with their clients. A universal bank's fragility could be further aggravated by questionable activities due to the presence of internal conflicts of interest. A bank that owns a significant share in a client firm – and even helps manage that firm – may be less willing to see the said client defaulting on loans, therefore fostering inefficiencies to the detriment of the bank's shareholders and other clients.[69]

Of course, the above explanation negates the presence of central banks with lender-of-last-resort deposit insurance. The role of central banks in preventing and stopping crises is a complex issue. Whilst deposit-insurance reinforces public confidence in the financial system (making bank runs less probable *ex ante*), the certainty that deposits will be paid back regardless of the banks' portfolio decisions may lead banks to take excessive risks (moral hazard), and depositors to be less concerned with the quality of different banks (adverse selection).[70] If a crisis does occur, central banks may be more willing to bail out large universal banks than their specialist competitors because they may be judged to have a more significant impact on the development of the economy as a whole (they are "too big to fail").

(2) An adapted version of a new financial model developed by Arnoud Boot and Anjan Thakor is now used to address the dual market

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[69] Note that often universal banks only owned shares in their clients around the time of IPOs and did not have a long-term equity position in their clients. See Guinnane, "Delegated Monitors," 108. This fact, however, does not damage the argument developed here; if a bank engages in "repeated interaction" with a client over said client's entire life-cycle, then a similarly "collusive" long-term relationship may ensue.
[70] R. N. Bebczuk, *Asymmetric Information in Financial Markets: Introduction and Applications* (2003), 124.

for lemons problem.[71] The model has four key players: (a) commercial banks, (b) investment banks, (c) borrowers and (d) the financial market. Both bank types have a different *raison d'être*: whilst commercial banks specialise in post-lending monitoring to deter asset-substitution moral hazard, investment banks aim to minimise their borrowers' cost of capital through capital markets. Hence borrowers face a trade-off between the advantages of bank financing (which lies in the bank's ability to determine moral hazard) against the advantages of capital-market financing (which lies in the ability of capital markets to adapt to performance information through market price). If the severity of a borrower's moral hazard is captured by a publicly observable quality attribute, there exists some quality cut-off point, below which borrowers approach commercial banks (the moral hazard problem is too severe and requires bank monitoring), and above which they approach investment banks. The actual design of the new financial "innovation" (a product of a certain type/length/breadth) affects this cut-off point endogenously: if investment banks can design a new product that reflects more accurately the borrower's associated risk, then the cut-off will decrease.

Comparing now directly the two types of bank system structures. If functionally separated, then each investment bank will choose its investment portfolio based on the cost of innovation relative to the expected increase in the fee revenue that comes from sharing in the borrower's elevated payoff due to the innovation. But if universal, the

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[71] The exposition of this model draws freely from Arnoud W. Boot and Anjan V. Thakor, "Banking Scope and Financial Innovation," in *New Research in Corporate Finance and Banking*, ed. B. Biais, et al., (2002), 181-184. A similar, though less developed, line of argument can also be found in Guinnane, "Delegated Monitors." A similar line of argument is adopted by Caroline Fohlin in Chapter 3 of her forthcoming book on universal banking in pre-war Germany: C. Fohlin, *Finance Capitalism and Germany's Rise to Industrial Power: Corporate Finance, Governance, and Performance from the 1840s to the Present* (forthcoming 2007).

investment-banking arm of the bank internalises the potential risks of financial innovation on the consumer base of the commercial-banking arm (the borrowers). The net result is that commercial clients with less risky portfolios may leave the market *à la* Akerlof's market for lemons. Exit may continue until only the riskiest clients remain, hence making the universal bank more susceptible to bank runs. Hence, to compensate for this risk, the universal bank needs a higher expected profit from the innovation than does a functionally separated investment bank. The equilibrium level of financial innovation is therefore lower – and by extension the overall welfare effect is arguably lower – under universal banking vis-à-vis functionally separated banking.

Note that Boot and Thakor argue that their model only works in systems that are very consolidated: a universal bank would not be able to significantly internalise its risks if it is a small operation. Hence in a very fragmented universal banking system, financial innovation may not be significantly discouraged.[72] Interestingly, Boot and Thakor's model predicts that functionally separated banks will be driven out of the market in which universal banks can operate.[73] This is because stand-alone banks are competitively disadvantaged through absence of scale and scope economies (i.e. the positive economies of universal banks outweigh their associated increased risk of financial crises).

Adding now a fifth player to the model: (e) depositors. In addition to the adverse selection between borrowers and banks, the asymmetry also works between depositors and banks. In a banking system without official central bank supervision, depositors may not be able to distinguish between solvent and insolvent banks. During a crisis situation they may therefore withdraw their deposits regardless, forcing otherwise sound

[72] Such as that of the United States prior to Glass-Steagall.
[73] Boot and Thakor, "Banking Scope and Financial Innovation," 200-205.

banks into liquidation. This results in a second market for lemons, this time in banks themselves. The traditional literature argues that the risk of such a bank run is potentially higher in an environment with many small, undiversified, banks, whilst universal banks, inter-bank cooperation and branch banking could enable risks to be spread over a greater number of players.[74] However, this is not necessarily true: regardless of actual risk, large universal banks may be more exposed compared to specialist commercial banks because of the higher *perceived* risk associated with their investment banking client base.

The remainder of this section examines the exposure risk to financial crises of Dutch banks. The literature reviewed in Section 2 suggests that the Dutch banking system appeared to become "more universal" following the decline of *prolongatie*, the bank concentration movement and increased industrial demand for credit. On the one hand this enabled her to benefit from reduced information asymmetries and provided her with greater scope to internalise risk. But on the other hand, such a structure may have exposed her to the two problems discussed above, addressed separately as follows. (1) If banks learn how to structure their liabilities so as to match their long-term assets, then they may be unaffected by an economic downturn. But from the secondary literature it appears that much of the Dutch sector was inexperienced: during the war and post-war inflationary booms, banks were keen to increase their assets and started over-lending, and were thus ill prepared for the sudden deflationary years 1920-1923.

(2) Perhaps the Netherlands experienced a dual market for lemons situation. Newfound universality may have caused sound firms to exit the market, leaving only riskier crisis-prone clients behind. Similarly, sound

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[74] C. W. Calomiris and G. Gorton, "The Origins of Banking Panics: Models, Facts, and Bank Regulations," in *Financial Markets and Financial Crises*, ed. R. G. Hubbard, et al., (1991), 124, 117.

banks may have been forced out of the market, leaving only their riskier competitors. However, to what extent this dual market existed in the Dutch case is not clear from the secondary literature. Looking at bankruptcy figures alone (Table 2) is not sufficient; the underlying cause of the increase in bank bankruptcies over the period 1921-1925 must be ascertained. To what degree Boot and Thakor's concentrated markets prerequisite is fulfilled is also unclear.[75] An alternative explanation is that the crisis was the result of an absence of an experienced central bank with formal market oversight, not the sector's structure *per se*. Note also that the model's prediction regarding the market exit of functionally separated banks is not supported by the Dutch case, as a great deal of specialised institutions remained.

Of course, a correlation between bank structure type and crisis occurrence does not necessarily imply a causal relationship. It may not be the sector's new structure that caused the crisis, but rather a collection of factors, some of which related to her new structure, but others of which are exogenous to the system (such as the effect of German hyperinflation). Further empirical work is therefore required in order to determine to what degree the structure was the cause of the sector's problems, a discussion that is conspicuously absent from the current literature on Dutch banking.[76] Section 4 attempts to go some way towards addressing this in the case of one bank in the Dutch crisis.

## 4. A Tale of Two banks: Different Systems, Different Impact

The previous section reviewed the Dutch financial system in two different ways. First it examined the evolution of the system.

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[75] That is, does the Big Five's 26.6 percent share of all assets in 1918 satisfy Verdier's concentration condition (see UTable 1)?
[76] Personal communication with Dr. Jonker, 7 March 2006.

Subsequently it examined which type of banking system minimises the risk of financial crises. Thus far, the analysis of the Dutch banking sector has been along very general lines. But it is important to note that there was much variation within the sector. Some banks embraced the universal model more enthusiastically than others. Some banks fared badly during the crisis, whilst others escaped relatively unscathed. Following the crisis, some banks abandoned their universal policy immediately, whilst others clung on for a while longer.

This section looks at some of this variation within the sector. It presents a matched pair comparison of how two similar-sized Dutch banks fared in the 1920s crisis. These banks are the Rotterdamsche Bankvereeniging (henceforth the RBV), and the Amsterdamsche Bank (henceforth the AB). The literature suggests that the bank that fared badly – the RBV – had enthusiastically adopted a universal banking policy under the stewardship of her director Willem Westerman, whilst the bank that escaped the crisis unscathed – the AB – had a much more conservative policy outlook. This section tests whether there is a link between universal banking policy and banking stability in this case.

This section proceeds as follows. Section 4.1 examines whether the literature's characterisation of the banking industry in general, and these two competing banks in particular, is accurate by: (1) measuring the universality of the banking sector as a whole and the AB and RBV in particular; and (2) surveying (other) differences and similarities between the two banks. Section 4.2 then analyses the asymmetries in information that existed between the creditors, debtors, managers and regulators of the two banks on the one hand, and the general public on the other hand, in the build-up, climax and immediate aftermath of the crisis. It uses internal meeting notes and letters from different layers of management from the archive of the ABN AMRO bank – the two banks' legal successor – and through the analysis of contemporary newspaper articles. It then attempts to test the theories discussed in Section 3 using the new evidence presented here in Section 4.

## 4.1 Measuring the Universality of the Dutch Banking Sector

As discussed in Section 2, the Dutch banking sector arguably experienced a revolution in the first two decades of the twentieth century. Banks expanded in number and in size, established branch networks, and merged with one another. They also started to forge closer ties with industry, especially following the outbreak of war in neighbouring countries. But the literature is unclear to what degree these *algemene* banks were truly universal, i.e. to what extent commercial and investment banking services were combined. Jonker argues that the scale of the universal banking experiment is illustrated by the increase in banks' representation on supervisory boards of companies (200 interlocks in 1910, and 431 in 1923), a large part of which was due to the RBV (where interlocks exploded from 30 in 1910 to 127 in 1923).[77, 78] However, relative to the increased size of the banking system, this rise in non-executive directorships is perhaps less impressive. And there is also likely to be a lag between changes to the structure of a bank's balance sheet and the appointment of directorships. A more instantaneously responsive measure of universality would therefore be helpful. This section explores two such measures: (1) ascertaining the range of client and service types provided by the banks; and (2) developing a quantitative measure of

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[77] Jonker, "Sinecures or Sinews of Power?," 162.
[78] Abe de Jong and Ailsa Röell look in detail at the phenomenon of interlocking directorships in the Netherlands for three sample years (1923, 1958 and 1993). They find that in 1923, the proportion of non-financial exchange-listed firms with no bank interlocks was 40 percent, whilst 22 percent had one interlock, 12 percent had two, 8 percent had three, and 18 per cent had more than three. Abe de Jong and Ailsa Röell, "Financing and Control in the Netherlands: A Historical Perspective," in *A History of Corporate Governance around the World. Family Business Groups to Professional Managers* (2005), 495.

universality using consolidated bank balance sheets, the equity-deposit ratio.

But before proceeding with measuring universality, a brief survey of some key differences and similarities between the two banks is considered. The motivation for this is as follows: merely noting a correlation between bank structure and crisis occurrence is not sufficient to determine causality. In an ideal matched-pair analysis there is one single significant difference between members of the sample. It must be determined to what degree this is true when comparing the AB with the RBV. There may be other, perhaps more important, factors involved. The survey examines five themes: (1) early history; (2) the Amsterdam-Rotterdam rivalry; (3) the overall size of the banking operations; (4) their organisational structures; and (5) their branching strategy.

(1) The Rotterdamsche Bank – the RBV's main predecessor – was created in 1863 by a group of Rotterdam businessmen, including the prominent Jewish family Müller. It aimed to support Dutch trade with the her colonies in the East Indies, and to do so provided cheap credit to trade and industry in and outside of the Netherlands.[79] However, this early (unsuccessful) foray into investment banking was soon abandoned, and the bank refocused its attentions on traditional banking services to customers predominantly based in Rotterdam.[80] It was not until the 1911 merger that created the RBV[81] – and the subsequent takeover of the Amsterdam securities bank Determeyer Westlingh & Zoon in 1913[82] – that the bank ventured seriously into the business of long-term industrial

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[79] Joh. de Vries et al., eds., *Worldwide Banking: ABN AMRO Bank 1824-1999* (1999), 129.
[80] J. Jonker, "The Alternative Road to Modernity: Banking and Currency, 1814-1914," in *A Financial History of the Netherlands*, ed. M. t. Hart, et al., (1997), 116.
[81] Between the Rotterdamsche Bank and the Deposito- en Administratiebank (a Rotterdam-based securities firm).
[82] Which had a seat on the Amsterdam Stock Exchange.

finance. Meanwhile, the AB was established in 1871 and aimed to serve as an instrument in bonding the Dutch and German money markets. Amsterdam was the Netherlands' financial centre, and in its early days the AB was more active in the business of new securities than the RBV.[83]

(2) A famous rivalry between the cities of Amsterdam and Rotterdam had existed for hundreds of years. This primarily concerned the two cities' positions in foreign trade (a battle that Amsterdam was loosing), but had long turned into a cultural phenomenon. The AB and the RBV were seen as bitter rivals. In response to the creation and expansion of RBV, the AB raised its equity capital in 1912, and again in 1913. And in retaliation to the RBV's escapade into Amsterdam, the AB opened up operations in Rotterdam.[84] However, despite the very visible signals of rivalry, it is unclear how fierce the competition actually was between the two banks. Indeed, during the 1930s the pair made plans to merge their operations.[85] But this plan was abandoned following the outbreak of war in 1939. The nature of the banks' relationship likely changed as a consequence of the crisis at the RBV, to be discussed in the next section.

(3) Both banking operations are not the same size. Their relative positions swap twice. Table 4 below provides an overview of the activities of the AB and RBV for a selection of years. Up until the merger that created the RBV, the AB was the larger of the two banks. The AB made a bigger accounting profit, and provided a higher return for her investors. Following the mergers, the RBV becomes the bigger of the two institutions. Despite her making a bigger profit, her returns on equity remain below that of her Amsterdam rival. This is also true after the conclusion of the war, in 1919. This is likely explained by the RBV's

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[83] De Vries et al., eds., *Worldwide Banking: ABN AMRO Bank 1824-1999*, 133-135.
[84] Ibid.
[85] European Association for Banking History, *Handbook on the History of European Banks* (1994), 755.

decision to issue new share capital. 1924, the year of the crisis at the RBV, sees a swap in the position of the two banks; the balance total of the RBV is significantly reduced, whilst that of the AB remains relatively unchanged.

Table 4. Activities of the Rival Banks, 1900-1929 (in thousands of guilders)

| | Amsterdamsche Bank | | | Rotterdamsche Bank(vereeniging) | | |
|---|---|---|---|---|---|---|
| | Balance totals | Gross profit | equity (in %) | Balance totals | Gross profit | equity (in %) |
| 1900 | 28600 | 738 | 9.32 | 23270 | 488 | 6.80 |
| 1905 | 44600 | 894 | 10.55 | 22110 | 464 | 6.38 |
| 1910 | 51570 | 1296 | 10.61 | 30460 | 778 | 8.27 |
| 1913 | 86570 | 1863 | 7.80 | 123410 | 2609 | 6.93 |
| 1919 | 456740 | 9950 | 13.33 | 608370 | 17910 | 1.71 |
| 1924 | 423740 | 5830 | 5.98 | 288860 | 5170 | 7.38 |
| 1929 | 440860 | 7280 | 7.26 | 386210 | 2730 | 3.90 |

***Source**:* Vries, Joh. de, et al. eds. *Worldwide Banking: ABN AMRO Bank 1824-1999*, 1999, 133, 136, 256, 263

(4) Both banks had similar management structures, namely a dual management board comprising a *College van Commissarissen* (a non-executive directors committee/supervisory board), and a *directie* (the executive managers/directors). Despite this similarity, the secondary literature argues that both bank's management mentality was different, with the RBV willing to take greater risks than the AB.[86] The different

[86] e.g. with respect to the RBV's expansion, Willem Westerman, the RBV's president, was even known in the press as Willem de Veroveraar (William the Conqueror). De Vries, *Visserings Tijdvak 1914-1931*, 41.

mentality could be a symptom of location. Whilst the AB is headquartered in the Netherlands' financial centre, Rotterdam is arguably in the periphery.[87] Whilst Rotterdam takes the lead from industry (which is risky), Amsterdam engages in more conservative activities using traditional financial markets. From an analysis of internal board papers of the RBV in the next section, it is clear that there is an additional factor at play: the powerbase of the AB appears to have been centralised around her Amsterdam head office, whilst that of the RBV was very split between her Rotterdam and Amsterdam branches.[88]

(5) The AB and RBV both expanded their branch network over the first decades of the twentieth century, although in different ways and to different degrees.[89] Whilst the AB established its branches itself, the RBV expanded through acquisition. The AB's branches, which were all named after the parent bank, were run as subsidiaries of the main Amsterdam headquarters. The RBV's acquisitions, on the other hand, were incorporated into a new subsidiary bank, the Nationale Bankvereeniging (NBV), which until 1929 was run as a separate entity to its parent bank, and was headquartered in Utrecht.

Returning now to the issue of universality. One obvious method of determining universality is to examine closely the banks' different clients, and the services provided to them. However, this is not straightforward in this case for three reasons: (1) large parts of the RBV's archives were destroyed during the German bombing campaign on Rotterdam just prior

[87] Personal communication with Prof. Van Zanden, 7 April 2006.
[88] There is also a further management issue to consider: the effect of new office mechanisation in the form of punch card technology which was introduced at the RBV's Amsterdam office in the early 1920s. This apparently coincided with the adoption of new systematic management procedures. See O. de Wit and J. van den Ende. "The Emergence of a New Regime: Business Management and Office Mechanisation in the Dutch Financial Sector in the 1920s." *Business History* 42 (2000), 87-118.
[89] De Vries et al., eds., *Worldwide Banking: ABN AMRO Bank 1824-1999*, 254-257.

to the capitulation of the Netherlands in the Second World War;[90] (2) like many businesses, there appeared to be limited interest in company history for much of the banks' existence; and (3) when the two banks' archives were consolidated following the merger that created the ABN AMRO bank in the 1990s, they were significantly reduced in size; approximately five percent of all dossiers relating to the banks' creditors remain.[91] Despite these problems, many creditor files remain and analysing these is beyond the scope of this paper.

Some other insightful sources have survived, including the meeting minutes the *directie*. For the RBV these contain reports on the bank's current activities, their associated risks, ventures abroad, and discussions of whether to take on new clients. However, it is difficult to ascertain the range of clients from this source because it tends to focus on large clients, new clients and failing clients. For the AB these minutes are considerably less detailed and note only brief management decisions, and none of the discussions that led to these. A comparison using this source is therefore not possible.

As discussed in Section 3.1, Verdier develops a quantitative measure of universality using aggregate bank balance sheet data: the equity-deposit ratio. Verdier calculates this ratio for a cross-section of the aggregate balances of the major banks of 16 countries in 1913. The same methodology is used here to calculate the ratios for a panel of the Big

[90] With the destruction of the bank's headquarters on the *Boompjes* in May 1940, the majority of the bank's archive from the first eighty years of her existence was lost. Materials in the archive from before 1940 originate primarily from the branch in The Hague. D. J. Wijmer et al., *Inventaris van het Archief van de Rotterdamsche Bank N.V., 1863-1964*.

[91] The selection criteria concerned the type of client (with respect to size and sector), and also special cases (such as Jewish clients and the war period). D. J. Wijmer et al., *Inventaris van het Archief van de Amsterdamsche Bank N.V., 1871-1964*.

Five Dutch banks for the period 1911-1931.[92] The data is taken from a compilation volume of the balance sheets of the Netherlands' money-lending financial institutions and savings banks for the period 1900-1945 constructed for the Nederlandsche Bank in 1972.[93] The numerator is the sum of the balance items *kapitaal* (capital) and *gepubliceerde reserves* (published reserves), and the denominator is the item *deposito's* (deposits). The Big Five do not appear to hold savings – perhaps due to the prevalence of specialist savings banks – and so this is absent from the denominator.[94]

A further item that could be considered very liquid and therefore part of the denominator is the item *voor derden op prolongatie* (*prolongatie* held for third parties). But this was excluded because the data was not available for all the banks, nor for all years. This omission is perhaps problematic: despite the declining importance of *prolongatie*, it was still an important form of credit in the earlier years of the sample. An Appendix to this paper reports the raw data used in the construction of the ratio, in addition to the ratio series themselves.

Figure 2 (below) is a graphical representation of a sub-set of the series: the period 1916-1930. Omitting the first five years from the sample should reduce the problems associated with (1) the omission of *prolongatie* data from the denominator (by 1916 this market is less important); and (2) the one-time effect of the RBV merger (with respect to its issuance of new share capital on the stock exchange). The figure shows that the Big Five on aggregate hold a greater proportion of their

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[92] 1911 is chosen as the starting date because it is the first year in which data for all the Big Five is available, following the merger that created the RBV.

[93] Stichting voor Economisch Onderzoek der Universiteit van Amsterdam. "Eerste Rapport: Geldscheppende Instellingen en Spaarbanken." Amsterdam: University of Amsterdam, 1972.

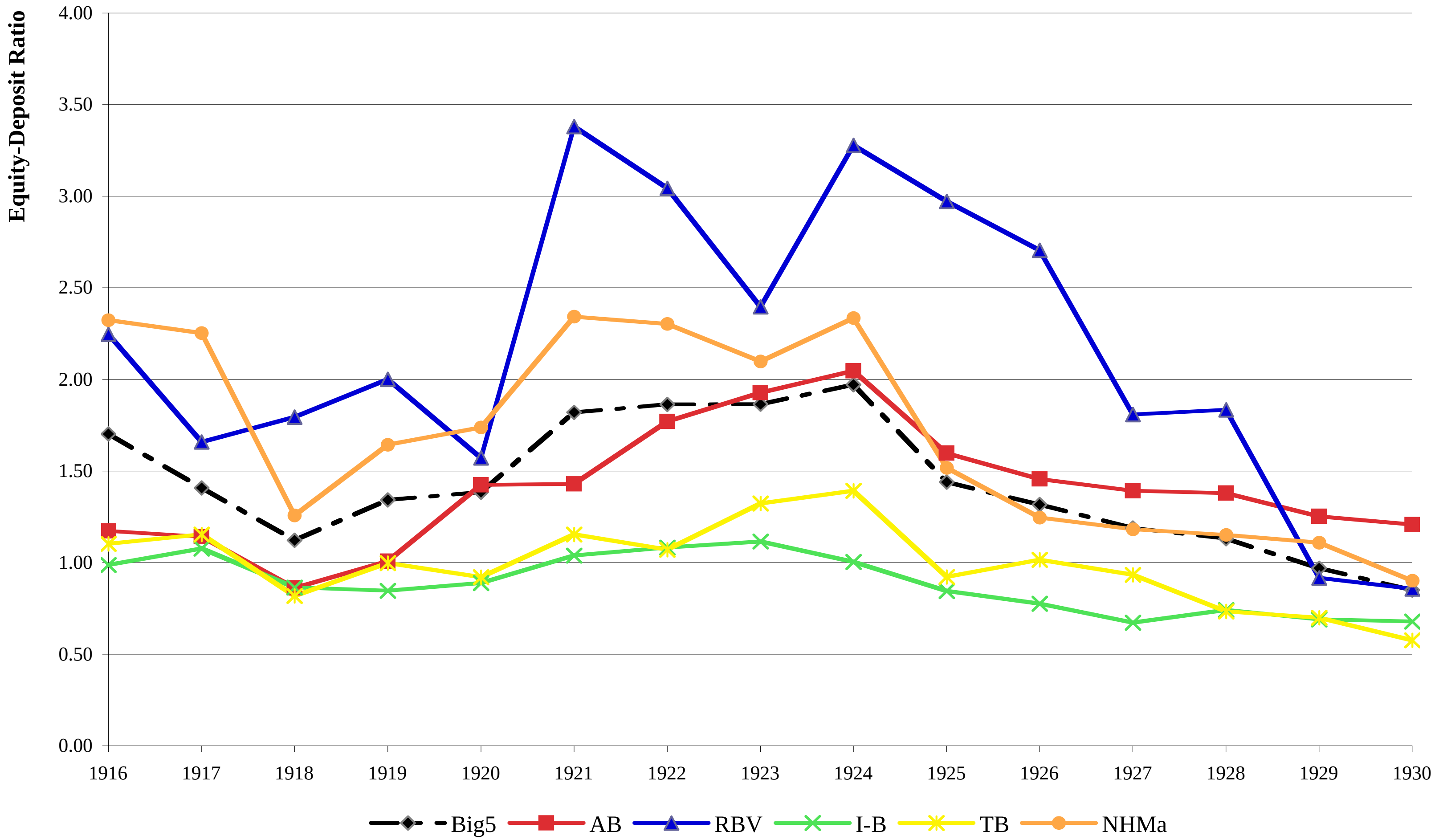
[94] Any savings that are held are probably included as part of the *deposito's* balance item.

assets in least liquid form, suggesting an industry-wide universal structure. The industry experiences the height of universality between 1921 and 1924, after which there is a reversal, with the ratio falling below parity following the onset of international depression in 1929.[95]

Note, however, that there is considerable difference within the sample. The RBV had a consistently high equity-deposit ratio throughout, especially when compared with the rest of the Big Five. She experienced a large rise in the ratio during both episodes of the crisis: 1921 and 1924. After the crisis, the RBV's ratio fell quite rapidly towards the industry average. Meanwhile, the AB, whilst operating an overall universal balance sheet, was consistently "less universal" than her Rotterdam rival. However, the AB was not the sample's "least universal" bank; this honour goes to the I-B. Overall, the results arguably confirm the literature's assertion that the RBV adopted a universal model more enthusiastically than the comparatively conservative AB.

[95] Note that this may be the result of either a conscious switch to universalism, or alternatively simply the effect of incautious over-lending powered by inflationary pressures and ballooning liquidity (as discussed briefly in section 3.2). Personal communication with Dr. Jonker , 1 October 2006.

Figure 2. Equity-Deposit Ratio for the Big Five Dutch Banks, 1916-1930




**Key:** AB = Amsterdamsche Bank; RBV = Rotterdamsche Bankvereeniging; I-B = Incasso-Bank; TB = Twentsche Bank; NHMa = Nederlandsche Handel Maatschappij
***Source**:* See text

This section sought to measure the level of universality of the AB and RBV relative to each other and the rest of the Big Five. The first methodology – the examination of board papers and client files – was not successful due to archival difficulties and time limitations. Although the second methodology – the equity-deposit ratio – was successful in that it provides an instant overview of the evolution of both banks, it is still problematic. In addition to the issues identified previously, two further problems are outlined as follows. (1) Can a bank's policy with regards to universality really be as volatile as Figure 2 suggests? Policy change takes time to implement, especially with regards to long-term clients. (2) What is the overall yardstick by which a bank is considered universal? If Germany's equity deposit ratio for 1913 is 0.73 (see Table 3), then surely the whole of the Dutch sector remains very universal throughout the sample?

This section has also outlined some of the other differences and similarities between the AB and RBV that may be responsible for – or at least contribute towards – the 1924 crisis. Themes (4) and (5) of the review are particularly pertinent and can be used to construct a plausible alternative hypothesis for the cause of the 1924 crisis: general bad management due to a combination of the RBV's disjointed relationship between her two main branches and the distant relationship with her NBV branch network. However, this raises the issue of reverse causality; universality could plausibly be both the cause and symptom of the bank's management style. The following section, Section 4.2, will examine this alternative hypothesis, and the issue of reverse causality, in more detail in light of a narrative of the crisis reconstructed from a variety of primary sources.

The analysis of this section has not measured Verdier's "inputs" (liquidity guarantee and market segmentation), only the observed "output" (the degree of universality). As a result, Verdier's hypothesis on the evolution of financial systems cannot be explicitly tested here and will therefore remain a topic for future research. Unfortunately this paper therefore fails to explore further her first main question concerning financial systems evolution.

### 4.2 A Failed Love Affair with Universalism?

The previous section analysed to what extent the Dutch banking sector was universal during the 1910s and 1920s. In general agreement with the literature, but with some discussed provisos, it found that the large Dutch banks became "more universal" in their service provision over the period, and that the RBV was "more universal" still than the AB. Section 4.2.1 examines in detail the events of 1924, the year in which the RBV was compelled to seek assistance from the Nederlandsche Bank and after which new senior management was installed, including a caretaker chief executive director previously employed by the AB. It examines this crisis from two separate points of view: (1) internally, through the analysis of board papers and letters;[96] and (2) externally, primarily using commentary from *De Kroniek* (The Chronicle), a respected contemporary bi-weekly financial journal published in Amsterdam and edited by Dr A. Sternheim.[97] The events of the crisis will be described in chronological order from mid 1922 (shortly after the conclusion of the first wave of bank failures) to the end of 1924.

Following this narrative, Section 4.2.2 then addresses this paper's second main question: whether there is a relationship between a financial

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[96] The minutes referred to here are of the following three layers of the RBV's management: (1) the weekly meetings of the *College van Commissarissen*; (2) the weekly meetings of the *Commissie uit Commissarissen*, after 1924 known as the *Comité en Directie*, a sub-committee of non-executive directors plus managing directors of the bank; and (3) the frequent meetings of the *directie*.

[97] From 1926 this journal was renamed after its editor: *De Kroniek van Dr. A. Sternheim* (Sternheim's Chronicle).

system’s structure and risk of financial crises. The effects of the differences and similarities between the AB and the RBV, as discussed in the previous section, are again considered. The working hypothesis is that the RBV’s universal scope was the cause of her difficulties. The alternative hypothesis is that the bank’s problems were due to general bad management. The section settles for a middle ground: the bank’s crisis was caused by general bad management that can be primarily attributed to her universal structure.

### 4.2.1 *A Narrative of the 1924 Crisis*

Before proceeding with an account of the crisis, some of its primary protagonists are introduced. Key leaders of the RBV were (1) Willem Westerman, who was installed as an RBV bank director in 1904 and made her president in 1908, and who presided over the bank’s expansionary policy, (2) J. P. van Tienhoven and (3) K. P. van der Mandele, both of who were brought to the RBV by Westerman as bank directors in 1916, and finally (4) Y. J. H. van der Meulen, another of the bank’s directors. Meanwhile, at the AB an important figure in the narrative is (5) Arie J. van Hengel, one of that bank’s directors. Key players in government include: (6) Gerard Vissering, president of the Nederlandsche Bank, and (7) Hendrikus Colijn, minister of state for finances. Crucial in the story is also the role of (8) Anton G. Kröller, who was simultaneously managing director of Wm. H. Müller & Co. N.V. – a trading, shipbuilding and mining concern that had experienced considerable expansion during the post-war boom – and an RBV *commissaris* (non-executive director).

The narrative starts with an early example of the RBV’s easy industrial credit policy and internal management conflict between different branches of the bank. At the weekly bank directors meeting of 2 November 1922 there is a lively discussion about Westerman’s recent unilateral decision to guarantee a new loan of US$3 million to Müller & Co. for its American cereal operations from the Amsterdam branch of the RBV.[98] Van der Meulen, who operates out of the Rotterdam branch of the RBV, seems angry that he was only informed about this loan after it had already been issued. He argues that in future all directors should be consulted over such large loans. He is concerned about the financial risks Müller & Co. are taking and their impact on the liquidity of the bank as a whole. Van Tienhoven and Van der Mandele do not appear to share Van der Meulen's grievances.

The narrative continues with a look at RBV operations from an external perspective. In the fifth issue of the newly created *De Kroniek*, published on 16 May 1923, concern is voiced about the latest company accounts filed by the RBV.[99] The article argues that the bank looks like the most vulnerable in the sector. It speculates that her problems are caused by: (1) the downward business cycle in general; and (2) clients in shipping and mining in particular. The article criticises the RBV for not including her obligations towards her NBV subsidiary. It is also apparently difficult to tell from her accounts why the bank's profits are reduced compared to previous years. Meanwhile, the newspaper's opinion of the AB is very positive. She is described as 'the best led and […] strongest of our banks'.[100]

Returning to a view from the inside, with another indication of management difficulties. On 11 September 1923, Westerman tells his fellow directors that he feels that he has recently been left out of the loop in the decisions to take on new business. The minutes read: 'If he [Westerman] had sole say, many unwanted credits would not have been

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[98] Minutes of the Directie meeting, 2 November 1922
[99] 'Balans-Analyse: Rotterdamsche Bankvereeniging', *De Kroniek*, 16 May 1923, 28-29
[100] Author's translation, 'De Amsterdamsche Bank: Buitengewone positie', *De Kroniek*, 2 May 1923, 11-12

issued'.[101] To tackle the apparent un-coordination and lack of communication between the bank's Rotterdam and Amsterdam branches, Westerman proposes to increase the importance of the national *directiecentrale* (management centre), housed in the newly built branch of the RBV at the Kneuterdijk in The Hague. All accounting functions are to be moved to this single branch, instead of the current arrangement whereby the Rotterdam and Amsterdam branches operate almost independently of one another.

The following month, on 4 October, considerable time is spent discussing the state of affairs at Compañia Mercentil Argentina, a trading company operating out of Buenos Aires in which Müller & Co. appears to have a large stake. The minutes record the objections of an RBV director, Ornstein: '[…] every year our position worsens. Every year our losses increase and the chance of making a profit grows smaller. Does this really weigh positively against better possible returns in the long term?'[102] The directors decide to grant the firm a temporary loan using its Hollandsche Bank subsidiary as a front, and to issue Müller & Co. with an ultimatum to reduce the risks of its South American operations. Bank director Van der Vorm proposes a change to the bank's statutes that would force a greater cooperation between the RBV's directors and her *commissarissen* – of which Müller & Co. director Kröller is one – in order to tackle similar problems in the future. Westerman disagrees, as this would send out negative signals about the bank to the public. He wishes to handle the matter more informally.[103]

Müller & Co. is not the RBV's only problematic client; the shipping conglomerate Furness-Stokvis is the subject of much discussion at the

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[101] Author's translation, Minutes of the Directie meeting, 11 September 1923
[102] Author's translation, Ibid., 4 October 1923
[103] The record of this loan arguably disproves Abe de Jong and Ailsa Röel's assertion that the RBV did not issue loans to the firms with which it had management interlocks. Abe de Jong and Ailsa Röell, "Financing and Control in the Netherlands", 492.

monthly meetings of the *commissarissen*, an example of which is found on 19 March 1924.[104] Van Tienhoven reports problems at one of the firm's subsidiary companies that places the RBV in a 'less than pleasant' position. Shortly after this meeting, an article in *De Kroniek* describes Furness-Stokvis's plan to solve her problems by reducing the concern's share capital by 10 percent as 'naïve and fantastical'.[105]

Despite the bank's internal worries, the publication of the RBV's 1923 annual report to shareholders published in May 1924 reads on the whole upbeat, blaming the bank's 'minor problems' on the economic cycle.[106] The report apparently passed through the bank's layers of management with little opposition: her *commissarissen* passed a draft with just minor corrections at their meeting on 23 April.[107] A 4.5 million-guilder dividend was paid to ordinary shareholders. Meanwhile, *De Kroniek* is not overly convinced with the bank's upbeat tone, noting that the bank remains to kick her habit of inflating her figures.[108] The article complains that it is very difficult to determine the strength of the concern from the outside because of problems with the way her figures are reported: again, the RBV's NBV subsidiary is not included in the accounts, and some items that have previously always been noted on the RBV balance sheet – including her pension fund – have now mysteriously disappeared. The article estimates that of the bank's reported 36.5 million guilders of reserves, 20 million are in the form of shares in industry. With a further reported 18.4 million in shares in other financial institutions, the article argues that the reserves are not very liquid and disposable and

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[104] Minutes of College van Commissarissen meeting, 19 March 1924
[105] 'Balans-Analyse: Furness-Stokvis', *De Kroniek*, 26 March 1924, 378-379
[106] 1923 Annual Report of the Rotterdamsche Bankvereeniging
[107] Minutes of College van Commissarissen meeting, 23 April 1924
[108] 'Balans-Analyse: Rotterdamsche Bankvereeniging', *De Kroniek*, 7 May 1924, 426-428

that their function 'as a guarantee for profitability is limited'.[109] The journal is worried about the risk of the bank's shareholding portfolio. It questions how the bank is financing her dividend. It concludes that 'only a very positive upswing in the business cycle that increases the bank's profitability can stabilise her position'.[110]

The RBV crisis proper plays out over the summer of 1924. On 12 May, within a month of issuing a dividend, the minutes of the directors meeting state that 'the Nederlandsche Bank shall open a special emergency overdraft account for us using promissory notes of various of our illiquid debtors as collateral'.[111] Further details about this account are discussed at the meeting on 15 May of the newly created *Comité* – an extra layer of management created by Westerman and consisting of the bank's directors and a few of her *commissarissen* (note that Kröller was not made a member of this body).[112] The meeting's minutes state that the directors are not reassured by the tone of the Nederlandsche Bank's correspondence. One director notes that 'rigorous steps' need to be taken in order to increase the liquidity of the RBV. A list of problematic clients that need to be addressed in urgency includes Furness-Stokvis and Müller & Co. The notes argue that a mere transfer of some of Müller & Co.'s loans to other banks is not sufficient, and that a more permanent solution needs to be found that addresses the root cause of the concern's difficulties.[113]

By the time of the next directors meeting on 26 May, Van Tienhoven has visited the Nederlandsche Bank to make formal

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[109] Author's translation, Ibid., 427
[110] Author's translation, Ibid., 428
[111] Author's translation, Minutes of the Directie meeting, 12 May 1924
[112] Minutes of the Comité en Directie meeting, 21 May 1924
[113] Aside from Müller & Co.'s problematic business activities, the concern was also used by Kröller and his wife as a source for funding their growing art collection. Personal communication with Dr. Jonker, 1 October 2006.

arrangements for the emergency loan, which is to amount to some 35 million guilders.[114] At this point in the negotiations the Furness-Stokvis account appears to have been left out of the equation, and the loan is designed to cover German cereal credits and the Müller & Co. and the Compañia Mercentil accounts only. Meanwhile, the main branches of the bank in Rotterdam and Amsterdam appear to have been busy ridding themselves of bad loans. However, one of the directors warns that they have now exhausted this avenue of increasing liquidity. The directors decide that they are to inform Furness-Stokvis that they wish to cease any further dealings with that company.

Two days later, on 28 May, RBV management plans a drastic course of action aimed at restoring public confidence in the bank during a meeting of the *Comité*. An annex to the meeting minutes, marked as 'very confidential', discusses how as a consequence of adverse media attention, mistrust in the bank has reached such heights that it has caused incredible downward pressure on the RBV's share price, which in time could have very serious consequences.[115] Westerman tells his fellow directors that the public, and especially the Amsterdam stock exchange, blame him and Van Tienhoven personally for the bank's state of affairs. Van Tienhoven then informs the directors that he has decided to resign from his post to act as the 'peace offering' that the public demands.[116] Westerman's plan is to then call an Extraordinary General Meeting (EGM) of shareholders in August, at which the position of bank president will be abolished. Instead the bank will be lead by a new body, a *Raad van Toezicht* (*RvT*, translates to overseeing council). Westerman would then swap his current position for that of joint president of the *commissarissen* and *RvT*. In Westerman's opinion, the key difference compared tot the

[114] Minutes of the Directie meeting, 26 May 1924
[115] Minutes of the Comité en Directie meeting, 28 May 1924
[116] Author's translation, Ibid.

status quo will be that management of the bank would be led by consensus: Westerman would have members of the *RvT* constantly around him for advice. However, there is some discussion in the meeting as to whether the public would perceive it in this way, as essentially the same individuals would remain in charge, although in different guises. Other directors are worried that the dual resignation would have the opposite effect to that that is intended. They argue that such an announcement could lead to further adverse share price fluctuations.

Westerman presents his plan, now agreed upon by the directors, at a specially convened meeting of the *commissarissen* on 5 June. He informs these non-executive directors, among whom Kröller, that 'recently he is under the impression that it is not going well with the bank, especially in Amsterdam'.[117] There is much discussion whether the proposed course of action is dangerous so short after the Annual General Meeting (AGM) held the previous month. Director Ornstein informs the *commissarissen* that only after the AGM did the true state of affairs with the bank's 'dubious creditors' come to light. The bank's directors inform the *commissarissen* that the RBV has been forced to buy up 2.6 million guilders of her own shares in order to stabilise the share price. They argue, and the *commissarissen* appear to agree, that Westerman's plan should be implemented, as further share price support is unsustainable. A week later, at the 12 June *Comité* meeting, the minutes read that the bank's liquidity still 'leaves something to be desired'.[118] Müller & Co. and Furness-Stokvis are again fingered as the culprits. Details of Van Tienhoven's resignation, which is planned for 15 June, are outlined. There is discussion of a rumour circulating at the stock exchange that Westerman is to resign, which can be 'positively denied'.

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[117] Author's translation, Minutes of College van Commissarissen meeting, 5 June 1924
[118] Author's translation, Minutes of the Comité en Directie meeting, 12 June 1924

On 16 June *De Kroniek* publishes the news of Van Tienhoven's resignation as director. The accompanying comment praises his time at the RBV:

> The change in position of Mr Van Tienhoven is undoubtedly one of the most important occurrences in the area of banking in recent times. From 1912, and especially during the war, Mr Van Tienhoven has been the most important driving force behind the bank merger movement and in the finance of domestic industry. His work in the reorganisation of provincial bank business has been of great importance for our country, both directly and indirectly.[119]

However, Van Tienhoven's resignation proves insufficient to calm markets. A month later, on 1 July 1924, the Nederlandsche Bank makes the following communiqué available to the press:

> The various rumours concerning the financial position of the Rotterdamsche Bankvereeniging have motivated the directors of this institution to turn to the president of the Nederlandsche Bank, whom they are providing with all materials regarding the liquidity of the Rotterdamsche Bankvereeniging.
>
> Following an examination of the provided materials, the president of the Nederlandsche Bank has proclaimed that he is prepared to work with the directors of the Rotterdamsche Bankvereeniging, and if necessary to maintain her liquidity. [120]

There is a strange absence of records of directors meetings in the immediate build-up to the publishing of the above communiqué. From De Vries's account of the RBV crisis, which makes use of the personal diaries of some of the bank's directors (but not the sources used here), it appears that these meetings were held in private at the homes of directors and were not minuted. Interestingly, De Vries notes that a group of RBV directors initially approached Nederlandsche Bank president Vissering with news of the bank's problems without Westerman's

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[119] Author's translation, 'Mr. Dr. J. P. van Tienhoven', *De Kroniek*, 16 June 1924, 472
[120] Author's translation, 'De Rotterdamsche Bankvereeniging: Onder curateele', *De Kroniek*, 1 July 1924, 488-489

knowledge.[121] Later, on 30 June, and now in the presence of Westerman, Vissering arranged 50 million guilders of support for the RBV, under guarantee from finance minister Colijn. De Vries argues that Colijn does not initially wish to lend support to the RBV share price, only to stand guarantee for the bank's bad debt. But Westerman apparently later convinces him to increase government support by an additional 10 million guilders with which to buy up RBV stock.[122]

At the time of the communiqué, the public appeared to be completely in the dark about the goings on in the finance ministry. *De Kroniek* wonders why the RBV itself did not publish the news, instead of the Nederlandsche Bank.[123] The article returns to the point it made in the May that dividends should never have been paid to shareholders. The article asks how the Nederlandsche Bank is able to finance its possible intervention and speculates that the government is involved. If so, it argues that the government may have surpassed its mandate and that its actions could have a negative effect on the economy in the form of inflation.

Westerman explains in detail the chain of events that led to the Nederlandsche Bank's intervention and the published communiqué at the next meeting of *commissarissen* on 10 July (see Figure 3 for an extract of the original handwritten minutes of this meeting):

> Towards the end of June the supply of our shares was increased in such quantities, that the directors did not dare to buy up. After a discussion with the Comité, they [the directors] decided to call in help from the Nederlandsche Bank, whom declared willing to help in principle, but required further discussion with the government before a firm commitment could be made. […] The Minister [Colijn] declared that it was in the interest of the nation to avoid a catastrophe, and that he was therefore willing to support the Rotterdamsche Bankvereeniging with a substantial sum. […] there was talk with the Nederlandsche Bank about a

[121] De Vries, *Visserings Tijdvak 1914-1931*, 249.
[122] Ibid., 252.
[123] 'De Rotterdamsche Bankvereeniging: Onder curateele', op. cit.

> f 100,000,000 support, but the Nederlandsche Bank is to limit her support to 50,000,000 for the mean time, and that support for the share price, about which the Minister had shown support, was not on the table. In return the Nederlandsche Bank demanded the publication of a communiqué in the newspapers, which our directors conceded to under pressure. This communiqué was published in the morning papers of Tuesday 2 July, with the well-known disastrous consequences.[124]

The disastrous consequences in question were: (1) a crash in the RBV share price; and (2) what appears to be a small run on the bank. A meeting of the *Comité* held just prior to that of the *commissarissen* reveals that in the period 28 June to 5 July the bank's creditors withdrew money to the tune of 42.4 million, bringing reserves to a new total of 96.6 million.[125] However, a fully-blown run on the bank has been avoided: 'At the current moment withdrawals appear to have come to an end.'[126] Contrary to De Vries's account of the crisis, Westerman's account to the *commissarissen* notes that Colijn *was* willing to support the RBV's share price, but the Nederlandsche Bank was not. In the end it was the government that provided 10 million guilders with which to stabilise the share price because the Nederlandsche Bank refused to do so. But the state did not initially want to be seen openly to have lent support to the RBV and therefore used an intermediary, the firm Loon & Co.[127] Later in the same meeting, the minutes record that the Nederlandsche wishes the RBV to appoint a 'competent Dutchman of standing' as a new director who would then help reassure public opinion.[128]

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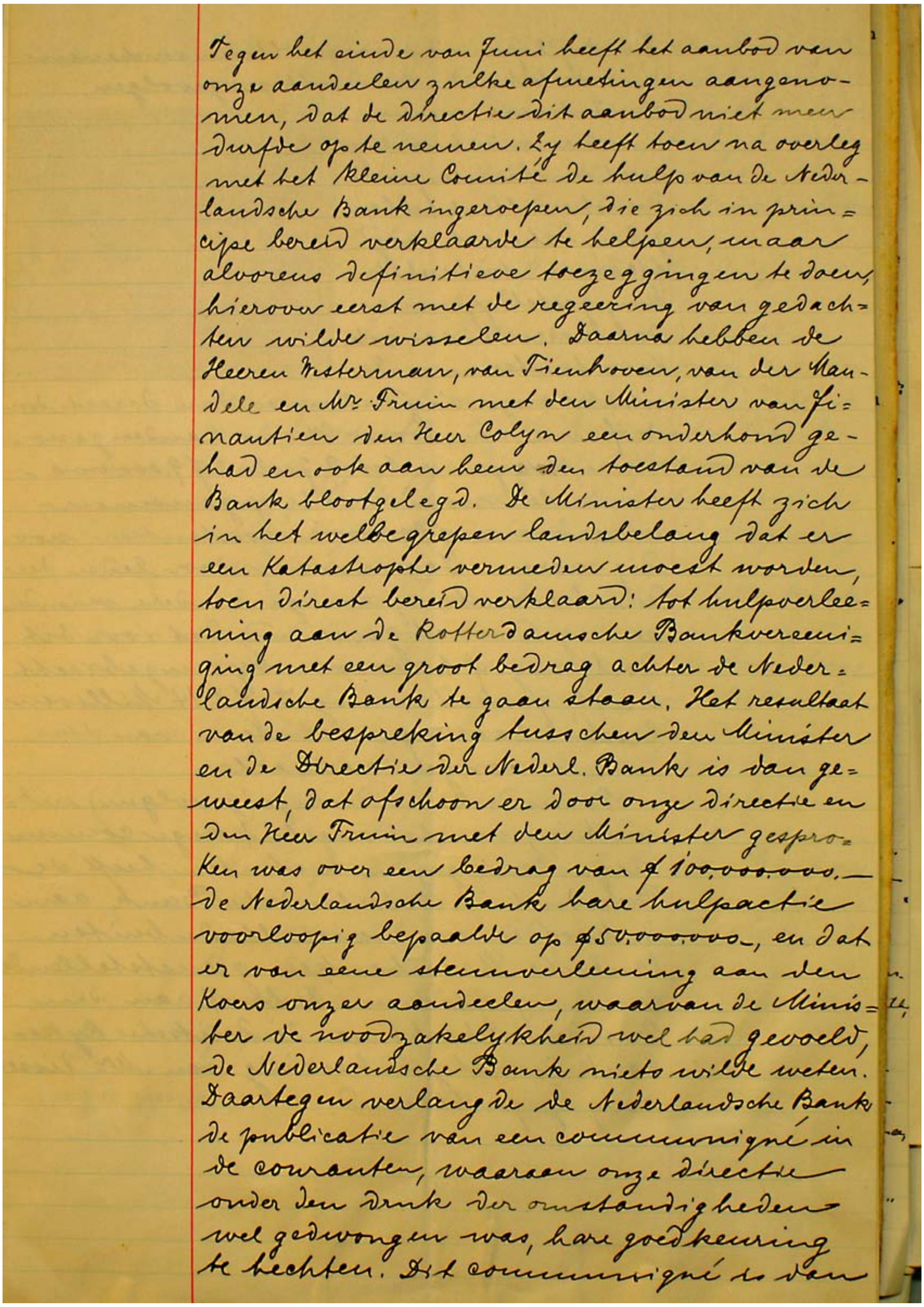
[124] Author's translation, Minutes of College van Commissarissen meeting, 10 July 1924
[125] Minutes of the Comité en Directie meeting, 10 July 1924
[126] Author's translation, Ibid.
[127] Van Loon & Co. was the brokering firm owned by Hope & Co. Personal communication with Dr. Jonker, 1 October 2006.
[128] There is some discussion about the possible identity of such a person. The directors appear to like the sound of a certain L. P. van Eeghen, a private banker from Amsterdam.

Figure 3. Extract from Meeting Minutes of the College van Commissarissen, 10 July 1924



Tegen het einde van Juni heeft het aanbod van
onze aandeelen zulke afmetingen aangeno-
men, dat de directie dit aanbod niet meer
durfde op te nemen. Zy heeft toen na overleg
met het Kleine Comité de hulp van de Neder-
landsche Bank ingeroepen, die zich in prin=
cipe bereid verklaarde te helpen, maar
alvorens definitieve toezeggingen te doen,
hierover eerst met de regeering van gedach=
ten wilde wisselen. Daarna hebben de
Heeren Westerman, van Tienhoven, van der Man-
dele en Mr. Fruin met den Minister van Fi=
nantien den Heer Colyn een onderhoud ge-
had en ook aan hem den toestand van de
Bank blootgelegd. De Minister heeft zich
in het welbegrepen landsbelang dat er
een Katastrophe vermeden moest worden,
toen direct bereid verklaard: tot hulpverlee=
ning aan de Rotterdamsche Bankvereeni=
ging met een groot bedrag achter de Neder=
landsche Bank te gaan staan. Het resultaat
van de bespreking tusschen den Minister
en de Directie der Nederl. Bank is dan ge=
weest, dat ofschoon er door onze directie en
den Heer Fruin met den Minister gespro=
ken was over een bedrag van ƒ 100.000.000.—
de Nederlandsche Bank hare hulpactie
voorloopig bepaalde op ƒ 50.000.000.—, en dat
er van eene steunverleening aan den
Koers onzer aandeelen, waarvan de Minis=
ter de noodzakelykheid wel had gevoeld,
de Nederlandsche Bank niets wilde weten.
Daartegen verlangde de Nederlandsche Bank
de publicatie van een communiqué in
de couranten, waaraan onze directie
onder den druk der omstandigheden
wel gedwongen was, hare goedkeuring
te hechten. Dit communiqué is dan

***Source:*** ABN AMRO Historisch Archief.

On 15 July *De Kroniek* publishes a detailed report on the RBV crisis.[129] Among other things, it addresses the following four issues: (1) what has occurred in the two weeks following the communiqué; (2) the possible cause of the crisis; (3) how the RBV can regain investors' trust; and (4) the role of the central bank in the crisis. These are summarised briefly as follows. (1) In the period since the communiqué, the article notes that 'the panicky reaction has disappeared completely and has made way for a period of calm, but without any clarification about the factual events.' It argues that this stability is vital for the normal functioning of the money markets, despite the fact that it has been achieved through artificial means. The author argues that the wording of the communiqué was probably too negative and that the liquidity was probably never in danger in the first place. (2) The article argues that the cause for the plummet in the share price was not negative rumours from the press, because otherwise 'all shares and obligations would always be priced at zero'. Instead the author believes the concern was simply overvalued as a result of 25 million guilders worth of new RBV shares that were issued by the bank 1919 in the middle of the Dutch post-war boom. On hindsight, given the current economic malaise, this appears to have been a mistake; the article points the finger at the (risky) expansionary policy of the bank. (3) The only way in which the RBV can regain the public's trust is to publish a full and frank admission of the bank's mistakes over the years, it argues. The RBV also needs a new banker in charge who can be trusted and a new set of *commissarissen*. (4) The article notes that the firm Loon & Co. bought up the shares that stabilised the concern's price at 89 percent of its former value. It speculates that this

[129] 'Kunstmatige en natuurlijke elementen der bankpolitiek', *De Kroniek*, 15 July 1924, 507-508

was probably carried out under the guarantee of the Nederlandsche Bank, but is unsure. It is very concerned about this course of action.[130]

On 17 September, a secret draft restructuring plan is presented to RBV's *commissarissen* (see Figure ).[131] It proposes to reduce the capitalisation of the RBV by swapping 25 million guilders worth of shares for amortisation certificates against future profits. The source of the shares is as follows: 15 million from the state-backed syndicate that was formed to support the share price during the intervention, and the 10 million worth of shares held by Müller & Co. This is to be used to write off bad debt (21 million) and buy additional RBV shares (4 million). A further 3 million of securities and property are to be covered from profits, and 15 million guilders worth of guarantees towards its subsidiary banks (including the NBV) are to come from a newly-created special reserve. De Vries's account of the crisis argues that the Nederlandsche Bank and the Dutch state were very involved in the drafting of this restructuring plan.[132] This is supported by the minutes of brief *Comité* meeting held immediately prior to 17 September *commissarissen* meeting, at which a dialogue between the RBV and the Nederlandsche is recounted.[133] Also at this meeting, director Van der Mandele argues that Furness-Stokvis needs to be urgently incorporated into any restructuring plan in order to 'prevent an investigation by the Department for Justice'.[134]

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[130] The article's very "classical" argumentation for this concern is explained as follows. If there is nothing wrong with the RBV, as its directors maintain publicly, then such support is unjustified because the share price would readjust in time on itself. If the central bank was worried about a possible contagionary effect on other bank stocks, then this too would only be temporary if the sector is on the whole healthy. If, on the other hand, the there is 'something rotten' in the banking sector that the public does not know about, then the intervention was justified.

[131] 'Reconstructieplan', Minutes of College van Commissarissen meeting, 17 September 1924

[132] De Vries, *Visserings Tijdvak 1914-1931*, 253-254.

[133] Minutes of the Comité en Directie meeting, 17 September 1924

[134] Author's translation, Ibid.

The finalised details of this restructuring plan are published only a month later in *De Kroniek* on 15 October 1924.[135] The press release also informs shareholders that the position of president is to be abolished, that Westerman is to be redeployed as a *commissaris* and that an AB director, Van Hengel, is to be made *gedelegeerd commissaris*, or caretaker director.[136] Among other things, *De Kroniek* addresses three issues concerning the RBV's press release: (1) the continued lack of clarity concerning the crisis; (2) the possibility of harmful collusion in the banking sector; and (3) the position of Westerman. These are addressed as follows. (1) The article argues that in many respects the public is none the wiser as to why the crisis occurred in the first place. It notes in particular the paragraphs in the 1923 annual report in which the bank's directors and *commissarissen* state that they are happy with the profits. The press release also does not reveal the origin of the 25 million to be used to reduce the bank's capitalisation, only that it is from 'friendly hands'. This is not satisfactory, the article argues. It demands to know to what degree the state is involved. (2) The choice of Van Hengel as caretaker director concerns *De Kroniek* because he is from the AB. Furthermore, he plans to maintain a position at the AB on their supervisory board. The article notes that the RBV and AB have traditionally been fierce competitors, and that having Van Hengel in this odd dual position is potentially dangerous for the consumer. (3) The article notes that if Westerman is truly responsible for the crisis, then he should be removed from the bank's management completely, not just be given a new job.[137]

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[135] 'Rotterdamsche Bankvereeniging', *De Kroniek*, 15 October 1924, 579-581

[136] Not Van Eeghen, as the RBV's management had initially proposed.

[137] De Vries argues that the Nederlandsche Bank and the state pushed Westerman into resigning and forced the RBV into accepting a Van Hengel as caretaker director. De Vries, Ibid.

Figure 4. The RBV’s Secret Restructuring Plan, 17 September 1924

GEHEIM.

RECONSTRUCTIEPLAN.

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De grondgedachte van het plan is om f.25.000.000,- aandeelen in te trekken en om te wisselen in winstaandeelen,die zoo snel mogelijk uit de winst worden geamortiseerd.

Het ingetrokken aandeelenbedrag kan dan bestemd worden voor afschryving.

De aandeelen die voor omwisseling tegen winstaandeelen in aanmerking zouden komen zyn :

f. 15.000.000,- Syndicaat

f. 10.000.000,- Wm H.Müller & Co

Allereerst zouden de winstaandeelen van het Syndicaat worden geamortiseerd.

De bedragen waartegen afgeschreven of gereserveerd moet worden zyn (in ronde bedragen) :

| | | |
|---|---|---|
| 1. | debiteuren . . . . . . . . . . . . | f. 21.000.000,- |
| 2. | eigen aandeelen, nog . . . . . . . | f. 4.000.000,- |
| 3. | garanties Natobank (5) en Bank voor Indië (10) ... | f. 15.000.000,- |
| 4. | effecten . . . . . . . . . . . . . | f. 2.000.000,- |
| 5. | gebouwen . . . . . . . . . . . . . | f. 1.000.000,- |
| | | f. 43.000.000,- |

Hiervan kunnen de posten 4 en 5 uit de winst over 1924 worden bestreden (zie hieronder).

De posten 1 en 2 worden afgeschreven uit de vrygekomen f.25.000.000,- aandeelen.

Tegen het risico van post 3 wordt een bizondere reserve gecreëerd door van de gewone reserve ad f.37.000.000,- een bedrag van f.12.000.000,- af te zonderen en over te boeken naar een speciale reserve.

***Source:*** ABN AMRO Historisch Archief.

By the time of the next issue of *De Kroniek*, EGMs have taken place at both the RBV and the AB to ratify the restructuring plans and staff changes. The article argues that six questions concerning the role of the Nederlandsche Bank need answering before the sector can return to normality:[138] (1) Does the Nederlandsche act objectively? (2) Has the Nederlandsche carried out any additional interventions, other than ascertaining the liquidity of the RBV, outside of her legal mandate? (3) What was the motivation behind the (now infamous) communiqué if, as all parties now maintain, the liquidity of the RBV was never in danger? (4) Why is the Nederlandsche concerning herself with the internal matters of private banks? (5) Has the Nederlandsche acted in the public interest? And finally, (6), can the banking sector continue to operate without any official regulations, as is currently the case?[139]

Van Hengel stayed on at the RBV until 1927, after which he returned to the AB. Under his reign, a number of wide-sweeping managerial and structural reforms were implemented at the RBV. These include paving the way for the incorporation of the NBV into the RBV, a comprehensive change of personnel on the bank's supervisory board, and the restructuring of bad debt.[140] There is even talk of selling the bank's recently constructed flagship branch in Den Haag to rival bank the Twentsche Bank.[141] Van Hengel's changes were conducted not without some opposition from the RBV's existing team of directors. For instance, on 17 December, Van Hengel pushes for the resignation of Van

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[138] 'Uit het Nederlandsche Bankwezen', *De Kroniek*, 1 November 1924, 595-596
[139] This last point is echoed by the economist H. M. Hirschfeld in 1925. See footnote 41.
[140] Especially Van Hengel's work restructuring the debt of Müller & Co. was important for the bank's long run stability. The ABN AMRO Historisch Archief have a newly compiled file of Van Hengel's correspondence with Kröller and Müller & Co. that together build an interesting narrative of the settlement between the two concerns. The details of this, however, are beyond the scope of this paper.
[141] This action was not carried out. Minutes of the Directie meeting, 25 March 1925.

Tienhoven from his post at the NBV, to be replaced by Van Hengel himself.[142] But as a result of objections from management, Van Tienhoven was allowed to retain his position.[143]

### 4.2.2 *An Evaluation of the Universal Banking Hypothesis*

First, a brief characterisation of the 1924 episode of the Dutch crisis is made along the lines of Bordo's recipe.[144] The crisis involved the following ingredients: (a) a sudden change in expectations as a result of new information made available through the media; (b) fear of the RBV's solvency by the public; (d) an actual threat to the RBV's solvency from her riskier clients; (e) a small run on the bank in the first week of July 1924; and (j) the whole process arrested from further escalation by intervention from the central bank and the state. A further important event in the crisis was the RBV's share price collapse.[145] This ingredient is not present in Bordo's recipe and can perhaps be interpreted as a symptom of ingredients (a) and (b).

Given the preceding section's account of the 1924 crisis, a discussion of the relationship between banking scope and banking crises follows. The two interpretations of the narrative discussed in this section are: (1) the RBV's universal scope was the cause of her difficulties; and (2) the bank's problems were due to general bad management that cannot be directly attributed to her banking scope. The evidence for each is outlined below.

(1) *Universality as the cause of the crisis.* The two routes through which a universal banking structure may result in a higher financial crisis

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[142] Minutes of the Directie meeting, 17 December 1924.
[143] Although eventually Van Tienhoven does have to give up this post.
[144] See Section 3.2 for full list.
[145] The size of this collapse requires further investigation. But for this, a new time series of the bank's stock prices needs to be constructed from contemporary financial newspapers.

risk are: (a) the lower versatility of universal banks during an economic downturn; and (b) the creation of a dual market for lemons.[146] With respect to (a), the Netherlands was indeed experiencing an economic downturn of sorts, the severity of which is debated.[147] The RBV did indeed have significant long-term interests in industry – especially with the firms Furness-Stokvis and Müller & Co. – which made her more vulnerable during this downturn. It is clear from internal board papers that some of the directors were uneasy about the bank's association with Müller & Co. from an early date. However, this client was not dropped early because of its very close association with the bank, primarily through cross-ownership of shares. Additionally, conflicts of interest likely arose as a result of the dual position of Kröller on the boards of both companies. Allowances were granted that other, more conservative, banks might not have considered, e.g. for Müller & Co.'s North American wheat operations and South American mining subsidiary. Later, by the time Westerman himself had finally identified the problem and initiated a management reform that excluded Kröller from the decision-making process (through his new *Comité*), it was arguably too late. The damage with respect to the bank's media image had already been done and central bank intervention and a totally new management with new leadership were required in order to reassure the public and bring the crisis to and end.

With respect to (b) the story is less clear. The theory goes that asymmetric information problems arose (1) between borrowers and banks that led sound borrowers to exit the market, and simultaneously (2) between depositors and banks that caused sound banks to exit the market. Ideally, to test this dual market for lemons hypothesis the bank's

[146] See Section 3.2 for a full account of the theory used here.
[147] See discussion in Section 1.

changing relationships with a range of clients needs to be tracked over a period of time. However, such an exercise was beyond the scope of this paper for reasons outlined in Section 4.1. The following should therefore be treated only as an indication, and further research is needed.

The narrative in the previous section recounts some of the ongoing information asymmetries between the RBV and the public. It is clear that the markets and the media questioned the activities of the bank from an early date, especially the lack of detail from her published accounts. The public did not know sufficient information about the plight of the bank to make an informed decision about her stability. An attempt to correct this situation and reassure the public (through publishing the communiqué) resulted in a share price crash and large amounts of withdrawals during the first week of July 1924. But a full scale run on the bank was avoided. To what degree this was a result of a superior flow of information between the parties is debatable, as financial commentators were still complaining about a lack of clarity months after a full-scale collapse of the bank had been averted. The substantial share price support could be interpreted as a signalling device to the market that the firm is still worth backing, despite the ambiguity at the time surrounding the source of this support.

(2) *General bad management as the cause of the crisis*. Throughout the narrative, a number of internal management conflicts were evident. These include: (a) arguments between Westerman and other directors concerning taking on new business, and later when calling in the Nederlandsche Bank for help; (b) between directors of the Rotterdam and Amsterdam branches of the bank concerning the course of action to be taken with respect to Müller & Co.; and also (c) between the directors and the *commissarissen* that ultimately led to the creation of a third level of management, the *Comité*. Although together these arguably form good evidence for the “general bad management” hypothesis, without a similar investigation into the management

processes of the AB it is hard to say whether *this* was the true cause of the crisis. However, such an investigation was made impossible for the case of the AB because of archival restrictions.[148] As discussed elsewhere, the secondary literature argues that the AB's management was indeed more conservative than her rival. Note however that conflicts are common in many boardrooms, irrespective of financial stability.

Internal management conflicts aside, a further indications of incompetence was the issuing of dividends to shareholders just months before the crisis. Minuted comments by one of the RBV's directors that the bank's true state of affairs only came to light *after* the AGM are hard to believe, especially considering the years of boardroom discussions about bad debt and the critical press coverage that the bank had recently been receiving. Even if true, then this is surely an indicator of grave management incompetence over many years.

This section concludes with a note of caution. To what degree the two interpretations of the crisis are mutually exclusive is unclear. Furthermore, one may be the cause of the other. The RBV's general bad management could be a symptom of the bank's universal structure. Similarly, bad management could have resulted in the bank's structural change towards universalism. Based on the limited evidence presented here, this paper speculates that the link is from structure to management in that much of the RBV's problems concern the management of her relations with industrial clients, exactly the type of client that universal banks have and that specialist commercial banks do not (i.e. her management structure was an inevitable consequence of the bank's close involvement in industry). However, the link between the two requires further investigation.

[148] As discussed in Section 4.1.

## 5. Concluding Comments and Research Agenda

This paper set out to answer the following two questions: (1) under what conditions universal banks come into existence; and (2) whether there is a relationship between financial system structure and financial crises. Its mode of analysis was a case study examination of the Dutch financial system in the early twentieth century, and particularly a matched-pair analysis of two competing Dutch banks. The two research questions to be addressed in this matched-pair were: (a) whether the structural difference presented in the literature between the two banks was accurate, and if so, (b) whether it was this difference that explains the crisis. The first (a) was addressed using Daniel Verdier's equity-deposit ratio methodology whilst the latter (b) used a new and detailed narrative of the events of the 1924 episode of the crisis reconstructed from primary sources.

The first question (1) was not addressed satisfactorily due to theoretical limitations and measurement difficulties. An answer to the second question (2) is more developed. Although there is some debate, universal structures arguably increase a bank's exposure to crises. This works particularly strongly through the lower versatility of universal banks during an economic downturn, but may also work through the creation of a "dual market for lemons". Of course, there are many theoretical problems in generalising from a case study. It is therefore perhaps prudent to restrict these findings to the Dutch case, i.e. the RBV's universal structure caused her financial instability.

Although this conclusion is by no means concrete, this paper nevertheless contributes to the existing literature in four ways. (1) It brings together two separate theoretical approaches from two disciplines regarding financial system structure. (2) It calculates a new panel of equity-deposit ratios that can be used to examine the evolution of the Dutch financial system in the early twentieth century. (3) It presents a new narrative of one particular episode in the crisis using primary sources that have not previously been used for this purpose. (4) It identifies further "gaps in the literature" that require additional research. This last point is expanded upon below.

The study of Dutch banking in the early twentieth century remains a fruitful area for future research. This paper is only a starting point in the analysis of the determinants of that country's financial crisis. There are four future research topics identified within this paper. (1) This paper has only started to analyse the 1924 crisis at the RBV. Much more work needs to be done, especially with respect to the bank's relationship with the firm Müller & Co. (2) This paper has only examined the plight of one bank in the 1920s crisis. There are of course many more banks operating at the time that need to be analysed to gain a fuller picture. Specifically the experiences of the smaller rural banks and credit cooperatives, which suffered particularly badly, should prove interesting. (3) Although much has been written on the topic of financial systems evolution, it remains an area of interest for three reasons. (a) The work of Verdier has recently reopened the debate. (b) The models presented in this paper were either unsatisfactory or difficult to test. (c) It remains unclear how the Dutch case fits within the wider European context. (4) The nature of the relationship between banking scope and financial stability remains unclear. Not only was this difficult to test conclusively using the methodology employed in this paper, but there remains no consensus in the theoretical literature.

## Appendix:

## Panel of equity and deposit data for the Big Five Dutch banks, 1911-1931

| | Big Five Aggregates | | | Amsterdamsche Bank | | |
|---|---|---|---|---|---|---|
| | Capital and Reserves | Deposits | Deposit Ratio | Capital and Reserves | Deposits | Equity-Deposit Ratio |
| 1911 | 116200 | 79900 | 1.45 | 15205 | 12816 | 1.19 |
| 1912 | 129200 | 80800 | 1.60 | 19725 | 16799 | 1.17 |
| 1913 | 147100 | 84400 | 1.74 | 24100 | 14740 | 1.64 |
| 1914 | 156000 | 92700 | 1.68 | 24750 | 16967 | 1.46 |
| 1915 | 160500 | 101300 | 1.58 | 25500 | 22962 | 1.11 |
| 1916 | 210100 | 123400 | 1.70 | 40309 | 34375 | 1.17 |
| 1917 | 251500 | 178600 | 1.41 | 50627 | 44376 | 1.14 |
| 1918 | 281900 | 251200 | 1.12 | 59316 | 68827 | 0.86 |
| 1919 | 382300 | 284800 | 1.34 | 78705 | 78087 | 1.01 |
| 1920 | 431300 | 311500 | 1.38 | 98000 | 68829 | 1.42 |
| 1921 | 430200 | 236300 | 1.82 | 98500 | 68931 | 1.43 |
| 1922 | 421800 | 226400 | 1.86 | 99000 | 55923 | 1.77 |
| 1923 | 428300 | 229600 | 1.87 | 99500 | 51623 | 1.93 |
| 1924 | 389200 | 197500 | 1.97 | 101000 | 49355 | 2.05 |
| 1925 | 388500 | 269900 | 1.44 | 101500 | 63565 | 1.60 |
| 1926 | 389900 | 296200 | 1.32 | 102000 | 70041 | 1.46 |
| 1927 | 381900 | 321200 | 1.19 | 102500 | 73639 | 1.39 |
| 1928 | 389700 | 344600 | 1.13 | 103250 | 74848 | 1.38 |
| 1929 | 391500 | 404000 | 0.97 | 104000 | 83019 | 1.25 |
| 1930 | 390600 | 459600 | 0.85 | 104500 | 86536 | 1.21 |
| 1931 | 370800 | 328900 | 1.13 | 104500 | 51325 | 2.04 |

| | Incasso-Bank | | | Nederlandsche Handel-Maatschappij | | |
|---|---|---|---|---|---|---|
| | Capital and Reserves | Deposits | Deposit Ratio | Capital and Reserves | Deposits | Equity-Deposit Ratio |
| 1911 | 9185 | 5406 | 1.70 | 53092 | 39682 | 1.34 |
| 1912 | 9216 | 6433 | 1.43 | 53652 | 37026 | 1.45 |
| 1913 | 9266 | 6114 | 1.52 | 54413 | 38072 | 1.43 |
| 1914 | 9291 | 4767 | 1.95 | 61837 | 38641 | 1.60 |
| 1915 | 9341 | 7645 | 1.22 | 62525 | 33723 | 1.85 |
| 1916 | 9441 | 9565 | 0.99 | 84595 | 36411 | 2.32 |
| 1917 | 14011 | 13009 | 1.08 | 116560 | 51724 | 2.25 |
| 1918 | 16447 | 19017 | 0.86 | 103091 | 81934 | 1.26 |
| 1919 | 24162 | 28540 | 0.85 | 125013 | 76050 | 1.64 |
| 1920 | 30012 | 33752 | 0.89 | 139139 | 80054 | 1.74 |
| 1921 | 30362 | 29225 | 1.04 | 135605 | 57900 | 2.34 |
| 1922 | 30612 | 28290 | 1.08 | 126429 | 54890 | 2.30 |
| 1923 | 30862 | 27674 | 1.12 | 132205 | 63007 | 2.10 |
| 1924 | 31112 | 31001 | 1.00 | 133197 | 57058 | 2.33 |
| 1925 | 31362 | 37112 | 0.85 | 130777 | 86160 | 1.52 |
| 1926 | 31612 | 40737 | 0.78 | 131476 | 105548 | 1.25 |
| 1927 | 31862 | 47352 | 0.67 | 127000 | 107418 | 1.18 |
| 1928 | 38400 | 51801 | 0.74 | 127000 | 110324 | 1.15 |
| 1929 | 39000 | 56454 | 0.69 | 127045 | 114528 | 1.11 |
| 1930 | 39300 | 57886 | 0.68 | 120045 | 133074 | 0.90 |
| 1931 | 39300 | 42062 | 0.93 | 100045 | 83800 | 1.19 |

| | Rotterdamsche Bankvereeniging | | | Twentsche Bank | | |
|---|---|---|---|---|---|---|
| | Capital and Reserves | Deposits | Equity-Deposit Ratio | Capital and Reserves | Deposits | Equity-Deposit Ratio |
| 1911 | 17400 | 6652 | 2.62 | 21364 | 15316 | 1.39 |
| 1912 | 25400 | 7380 | 3.44 | 21218 | 16195 | 1.31 |
| 1913 | 37800 | 8241 | 4.59 | 21544 | 17195 | 1.25 |
| 1914 | 38000 | 13116 | 2.90 | 22075 | 19196 | 1.15 |
| 1915 | 41000 | 18210 | 2.25 | 22162 | 18720 | 1.18 |
| 1916 | 52000 | 23148 | 2.25 | 21974 | 19922 | 1.10 |
| 1917 | 66000 | 39806 | 1.66 | 34302 | 29717 | 1.15 |
| 1918 | 67000 | 37340 | 1.79 | 36082 | 44094 | 0.82 |
| 1919 | 105000 | 52478 | 2.00 | 49441 | 49562 | 1.00 |
| 1920 | 110000 | 69984 | 1.57 | 54192 | 58873 | 0.92 |
| 1921 | 111000 | 32841 | 3.38 | 54707 | 47393 | 1.15 |
| 1922 | 111500 | 36633 | 3.04 | 54290 | 50705 | 1.07 |
| 1923 | 112000 | 46728 | 2.40 | 53710 | 40578 | 1.32 |
| 1924 | 70000 | 21358 | 3.28 | 53931 | 38750 | 1.39 |
| 1925 | 70000 | 23558 | 2.97 | 54850 | 59490 | 0.92 |
| 1926 | 70000 | 25873 | 2.71 | 54856 | 54023 | 1.02 |
| 1927 | 70000 | 38702 | 1.81 | 50500 | 54118 | 0.93 |
| 1928 | 70000 | 38166 | 1.83 | 51000 | 69494 | 0.73 |
| 1929 | 70000 | 76354 | 0.92 | 51500 | 73596 | 0.70 |
| 1930 | 70000 | 81734 | 0.86 | 56714 | 98397 | 0.58 |
| 1931 | 70000 | 64588 | 1.08 | 57000 | 87147 | 0.65 |

***Source:*** Stichting voor Economisch Onderzoek der Universiteit van Amsterdam.

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